

ATHLETIC JOURNAL

Vol. XX, No. 8

April, 1940



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James Barclay
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John Hill
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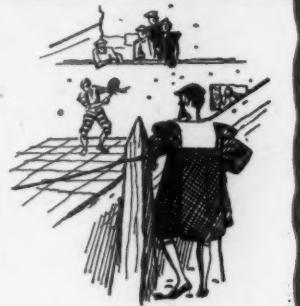
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The ATHLETIC JOURNAL

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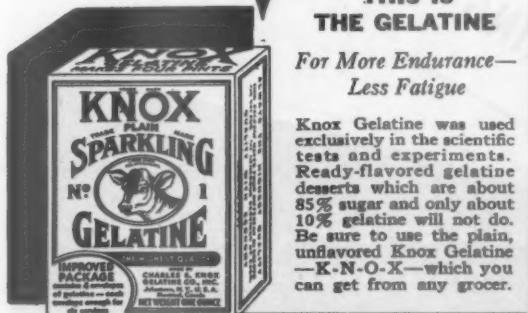
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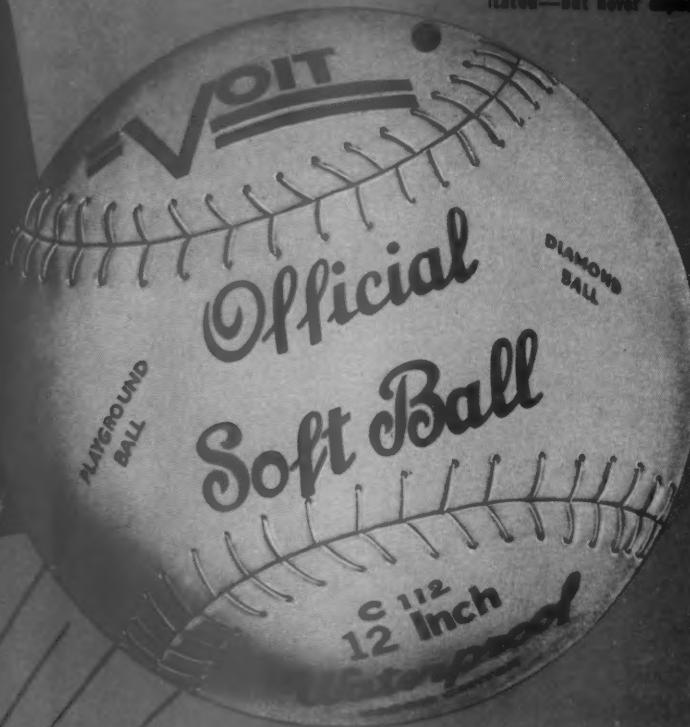
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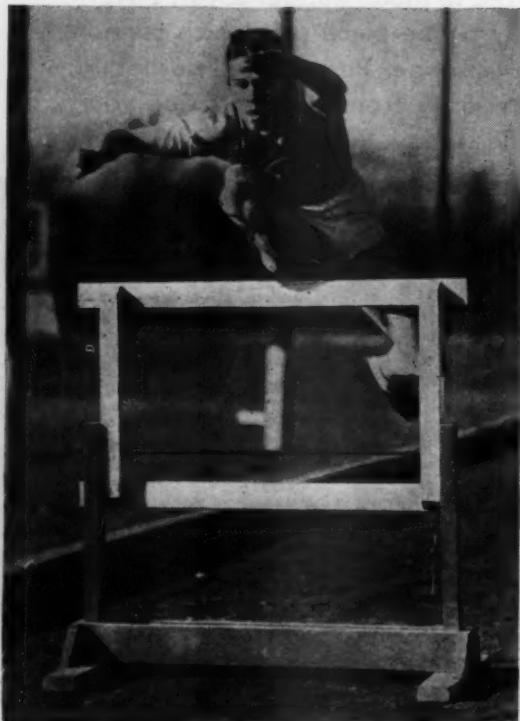
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26 and 27
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the outstanding athletic
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880-Yard Relay, One-
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Relay.

High School Section

(Separate Relays for
Class A and Class B
Schools; Iowa high schools
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and all out of state of
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440-Yard Relay, 880-
Yard Relay, One-Mile
Relay and Two-Mile Re-
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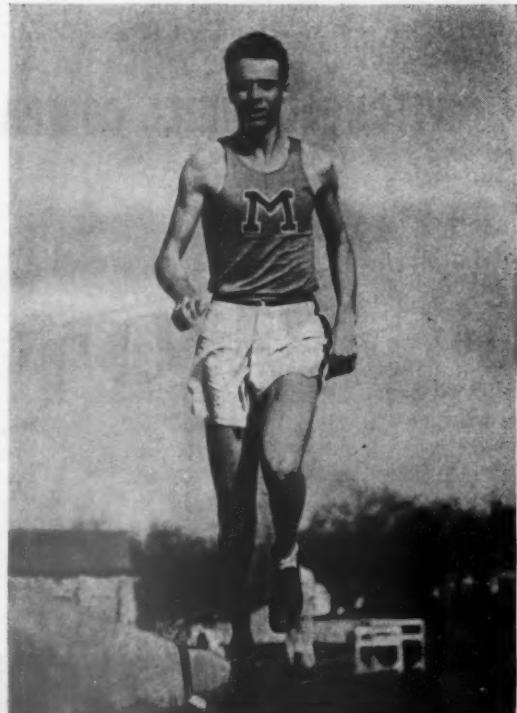
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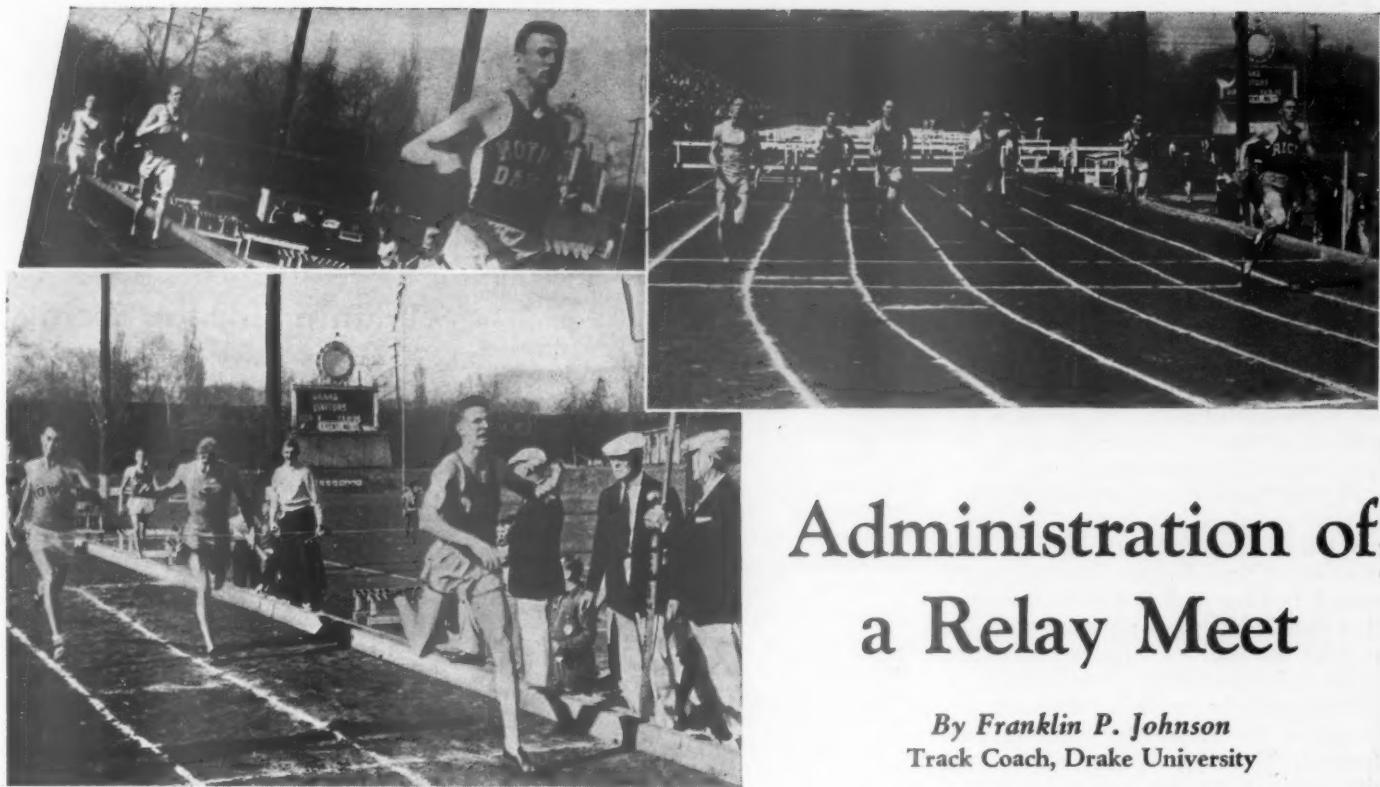
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Administration of a Relay Meet

*By Franklin P. Johnson
Track Coach, Drake University*

WITH but few exceptions, the administration of a relay meet requires the same organization and attention to detail as does any convention or gathering of a comparatively large number of people. Early and complete plans are, of course, necessary for the successful administration of a meet of any considerable size, and, in the last analysis, it is attention to the details of each department which makes for a smoothly running schedule, satisfactory conditions for competition, the coaches' and spectators' enjoyment of the meet and the ultimate satisfaction of the person or committee in charge of the entire affair.

In this connection it might be mentioned that it is in no case possible for one person to attend properly to all of the detailed preparations that have to be made in the successful administration of an athletic meet of this kind. A group or committee should, in all instances, be organized with the responsibility so divided that the work necessary in every department can be satisfactorily projected and completed. A general chairman, manager, or director is required to follow and co-ordinate the activities of the group.

Except for additional responsibilities on the part of clerks of the course, press stewards, and the person or persons handling the equipment and the preparation of the track, a relay meet requires little, if any, more attention than an ordinary track and field championship. There are, however, more events to run off because it is customary to include on the program of a relay meet a number of individual

events in which championships are determined.

The larger the meet, from the viewpoint of both number of competitors and size of attending crowd, the earlier must the committee in charge begin preparations for the affair. Meets attracting 500 or more participants and four or five thousand spectators, require administration activity as early as three or four months before the date of the competition, a convenient date must be set even before this time, unless the meet is held annually on a traditional date.

Following the announcement of the date, the first evidence of activity by the management is usually the sending of information about the competition to the various schools which are to be invited. This information should include the events which will be contested, the time schedule on which they are to be run, the rules of competition and eligibility, blanks for the proper entry of contestants, notice of drawings for the events and any special regulations considered necessary by the management. For those who may not be acquainted with other pertinent details in connection with the meet, information should be included concerning hotel accommodations in the community, the awards that will be made to winning and placing teams and individuals, attendant attractions, if any are to be provided, and some information about the kind of competition that might be expected, usually is partially available in a list of the official meet records and the results of the previous year's competition. Provision

for the desired awards in the way of trophies, medals, etc. should be made early by the person responsible for their selection. More than a month should be allowed for their manufacture and delivery. About this time or sooner the tickets should be printed, unless general admission accommodations only are to be made available to the ticket-buying public.

An early check of all the equipment necessary on the field and track for the smooth running of the meet should be made. A list of these items might be made here, but these requirements are very well covered in a section of the official Track & Field Rule Book of the National Collegiate Athletic Association, titled "Preparations for a Track and Field Meet." A program should be available for the spectators and if this is of considerable size and includes advertising, early attention to this should be given, although the names of participating teams and individuals cannot be included until the entries have been received.

Most successful meets are actively promoted by a sub-committee on promotion. This committee will, of course, consider the issuance of desirable publicity items, the sale of tickets, the co-operation of hotels and retail merchants for the display of various promotional materials. From the point of view of satisfactory attendance, this is a most important work. For the enjoyment of the people who are attracted to the meet, other sub-committees will play a large part, namely, those in charge of the officials and their proper

(Continued on page 44)

How Champions Train

Training for the Discus Throw

By Frank Hill

Track Coach, Northwestern University

HERE are nearly as many opinions as to the most effective type of ring-work in the discus throw as there are individual throwers; and yet there is a general agreement among coaches who have handled the top-flight throwers of recent years that there are certain basic matters of technique which must be incorporated into any style to make that style effective. Not having been fortunate enough to have worked with a thrower of that class in late years myself, I am going to take the liberty of passing on to the readers of this article the findings and observations of the coaches of the more successful of our present-day collegiate performers. The material upon which I am drawing is that which has been presented during the annual coaches clinics held in connection with the National Collegiate Track and Field Meets of the past two or three seasons.

Without deciding whether the thrower is to start in the back of the ring, facing the direction of the throw, with his back to it, or with his left side toward it, the question that I shall first take up is whether he will glide through the pivot and turn or whether he will jump around. Advocates of the former speak of its gracefulness; of the latter, of its power. Neither of them is exactly right. In between the two is the happy medium, perhaps, that will get the result we seek, the maximum of power delivered at the optimum instant of time.

The discus throw is a power event. Grace, and beauty, and smoothness of action are useful here only if they impart added force to the departing missile. The waltzing glide that seldom brings a crescendo of power is apt to develop a dip in the path of the discus during the body whirl with a resultant loss of continuity of applied power. The jump-method of getting across the ring and into the throwing position has the disadvantage of causing the thrower to come to a full stop at the end of the pivot jump and thus lose the momentum that should be his in a continuous motion action. The accompanying pictures of Pete Zagar of Stanford, Olympic and National Collegiate champion, were taken during the 1939 N.C.A.A. Meet in Los Angeles. They demonstrate rather well a form of ring-work that combines the most useful features of the glide and the jump-around and yet one that is definitely distinct from either. Note in Illustration 3, how the left foot is used to add power to the pivot, a help not available in

the jump style and not capable of developing much force during the glide.

To be successful, a discus thrower must develop a hip action which will allow him to snap his hips out ahead of the discus as it comes to the point of completing the throw. This free hip-action is a natural attribute with many of the best throwers. It may be developed in some degree by ambitious beginners through simple exercises, such as having the thrower stand in the ring, assume the final throwing stance, and then throw his right hip forward in a "shimmying" motion without lifting his right toe from the ground. An exercise on the tumbling mat may be performed by having the athlete lie on his back and, raising his right leg straight up at an angle of ninety degrees, cross the leg over his body and touch the mat as far as possible to the left with the right foot. The same exercise may be used for the left leg.

To a great extent, coaches seem to have abandoned the bent-arm method of carrying the discus behind the back in favor of the straight-arm style. The argument in favor of the former was—and is—that it caused the discus to lag the required distance behind the shoulder during the body whirl. A thrower using the straight-arm method can insure this lag by starting his forward whirl while the discus is being carried back from the shoulder to the full backward extension of the arm during the last preliminary swing of the discus. The accurate timing of the start of the pivot in relation to the position of the discus on its rearward arc is important and worthy of a great amount of experiment and study. The thrower who does not start his pivot until the discus has reached the point farthest back of its swing, is likely to find that the reaction of the arm and shoulder hurry the discus forward a little too soon; or that the strain of holding the discus at full extension to the rear is detrimental to the maintenance of equilibrium during the early stages of the action.

The power of the throw comes from the whirl of the body driven by the legs through the pivot and turn. It is imperative that the thrower keep the timing between the leg-drive and body position. To this end it is advisable to pivot the left side of the body as a unit rather than to twist the left shoulder back in an effort to pull the right shoulder through ahead of the discus. The illustrations of Pete Zagar demonstrate this point extremely well.

The work necessary to the development of proper foot-placement and body-balance in the ring is long and tedious and should, in itself, bring the athlete into fair condition for competition. To add snap to his footwork, short sprints—say of twenty-five or thirty yards—in competition with

team mates and from gun starts are of great value. For a sense of balance, work over the high or low hurdles and high jumping will help.

To here

Training for the Sprints

By Harry Hillman

Track Coach, Dartmouth College

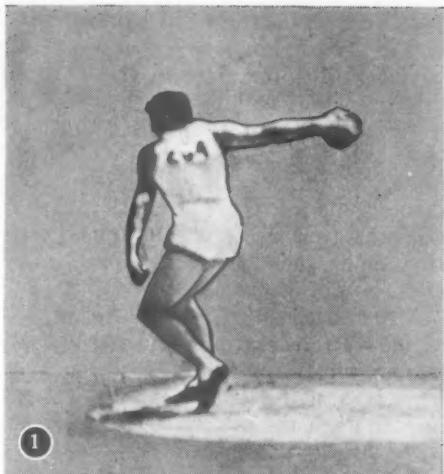
WHEN the call is made for track candidates usually twice as many boys report for the sprints as for the other events. Some believe that it takes less work to get in shape for the shorter dash races, than for the more gruelling races. There are, however, a great many things that an athlete must learn and practice before he can expect to become even an average sprinter.

Almost any boy can sprint, but how fast is another matter. Usually the best sprinter has natural speed and a boy, so gifted, has a very good chance of becoming a fast sprinter, after he has acquired the correct techniques such as the start, arm and leg action, balance and finish—in other words, the form needed to get all out of himself that is possible.

There is no special build needed by a sprinter. Good sprinters have been small and good ones have been tall. The smaller sprinters usually are fast off their marks and the average tall man generally has a stronger finish. For example, Arthur Duffey, formerly of Georgetown, who was a chunky chap with a lightning-fast getaway, even often appearing to beat the gun, usually got two yards on other good sprinters in the first ten yards. On the other hand, Ralph Craig, the former Michigan sprinter, who was a tall chap and a slow starter had a terrific kick at the end of his races. Years back it was the usual thing for Craig to be last in a 100-yard dash at 80 yards, but he came home with a drive that won many races for him. His best distance was the 220 yards, while Duffey was much better at 50, 60 and 100 yards. In fact he seldom went much farther in his races.

Any boy desiring to become a sprinter should start in the fall doing light cross-country jogging, in order to build the leg muscles up to the development which is required of a sprinter. Nowadays many sprinters break down with pulled muscles; their muscles will not stand the strain of the powerful thrusts, needed by a good sprinter. In the old days before automobiles became the fad, few of the good runners had much leg trouble as the older generation did more walking than the present-day athlete.

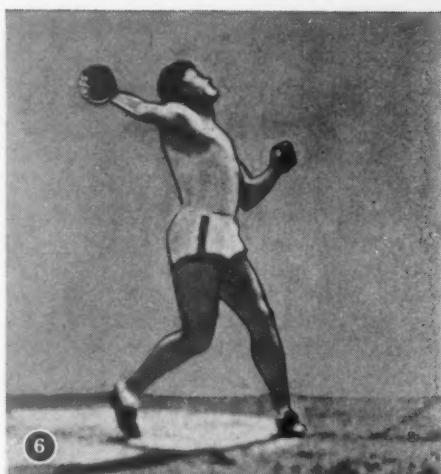
A very good example of the value of walking and jogging is found here in Han-



1



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6



2

Pete Zagar of Stanford, Winner of the 1939 N.C.A.A. Meet

Illustration 1—The thrower starts with his back in the direction of the throw. Note that the body has been started on its rotation to the left while the arm has not yet reached its full backward swing. This helps keep the discus behind the shoulder during the rotation of the body.

Illustration 2—Note the position of the left arm, held across the chest with a very apparent relaxation.

Illustration 3—The drive off the left foot is adding power to the pivot.

Illustration 4—The discus is carried well back during the pivot and turn.

Illustration 5 shows the completion of the turn. Note especially the flex in the right leg, the position of the discus in relation to the shoulder, the left arm flexed across the body, and the general relaxation that is so evident in this picture.

Illustration 6 shows the split instant before delivery. Note the flexed right leg giving the drive to the throw, the straight left leg, and the discus arm coming through relaxed and with a "sling" effect.

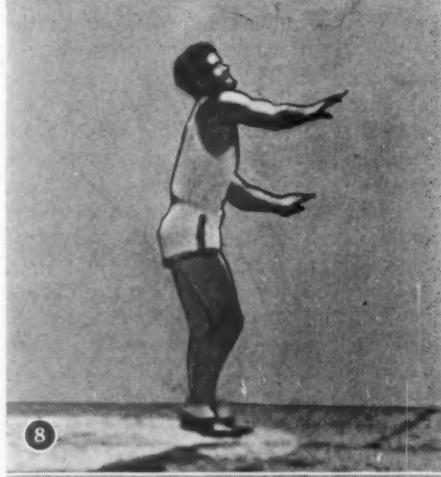
Illustrations 7, 8 and 9 show a good finish to an excellent throw. There is no indication of falling away to the left.



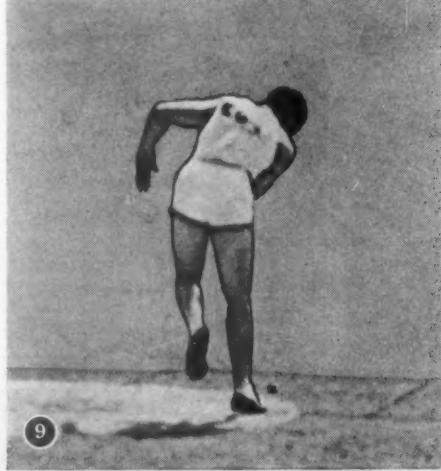
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8

over. There is a boy five miles from here, who, although only seventeen years of age, is perhaps one of the most outstanding middle distance runners in the country as a schoolboy. Without any strenuous training, because of his age, the boy has done 1:56 for the 880 and 2:16 for the 1000 yards indoors. This boy has developed tremendously by delivering newspapers every morning, over a three-mile route. Although young in age, his leg muscles are undoubtedly developed more than most youths, twenty-one years of age.

A five-mile hike or a two-mile jog, even some mountain-climbing in the fall will be of great help to any runner, even a sprinter. Some may say this type of work has a tendency to slow up a sprinter, and perhaps it does, out of season, but it gives the athlete the preliminary development needed for the violent efforts of a sprinter.

In the case of the old-time professional runners who made a living running the sprints, in the annual Sheffield Handicap race in England and the professional races held annually for sizable purses in the New England and the Middle Atlantic States, they spent many hours perfecting their form, and worked continuously trying to improve their starts. It was a regular thing to see these professional athletes use five or six lanes for their practicing work. They would start with different holes, change their hands and feet and would spend months trying to find out which way they could get off their marks the fastest. They would have possibly six or seven pairs of tight-fitting shoes and various length spikes, using the shoes best adapted to the tracks. The average school or college sprinter seldom spends any time except on running and in trying to get out of his holes. Consequently he loses out on the many small things that help make a sprinter.

Many good sprinters are quick thinkers; they respond readily and have control of their reactions. For example, in a group of high-class sprinters in such an event as the final of the 100 meters at the Olympic Games, it is interesting to watch their

quick responses to the commands and their quick reaction getting off their marks, as one small slip will put them out of the running.

The Importance of a Fast Start

One of the more important requisites of good sprinting is ability to get off to a flying start. This is necessary especially in the short indoor dashes. There are several methods of starting. For the "On-your-mark" position some athletes like to place their feet far back of the mark, others have what we might call the average start. This method has stood the test of time and is explained as follows: The sprinter places his front foot about six to eight inches behind the mark, with the rear knee about opposite the base of the large toe of the front leg. The set position is obtained by raising the body up so that the back is about level and the body as far forward as possible without being overbalanced. There are, as stated, many variations, and these changes may be made to suit the individual. Some have longer arms than others, some have longer legs so that there can be no definitely designated distance that a runner should use. After getting the principles of the start, the runner should then spend considerable time practicing on his stance. A sprinter should endeavor to keep as relaxed as possible. The arm action of a sprinter is very important. If the athlete starts with his left foot forward, when he drives his rear leg out of the holes, he should thrust his left arm forward in a relaxed front drive. This permits the runner to have a good forward body bend and permits him to throw himself into his running. Without this arm action the athlete would fall flat on his face. The right arm should drop back as the left arm goes forward. This is, of course, just an improvement on a person walking, as when he steps out with his right foot the left arm goes forward.

There are several opinions as to the place where the weight of the body should be for an athlete in the "Set" position. Some claim the weight should be about

two-thirds on the front foot and one-third on the hands. Many sprinters use either method but I feel sure that the better method is the one in which the weight is distributed. There should be just enough weight on the rear leg to allow for a quick drive. All this weight distribution should naturally be forward. The athlete should retain his front body-bend until he gets in his running, then his body comes up more erect, but, of course, never straight up.

Many coaches and athletes feel that a long first stride is helpful, while others take short quick strides. The method generally used is a natural stride which will be shorter when the athlete once gets under way. Much time must be used in practicing the starts as this is undoubtedly the most important part of a race. It is advisable for a coach to have someone who understands the sprints look the candidates over occasionally, correcting the errors.

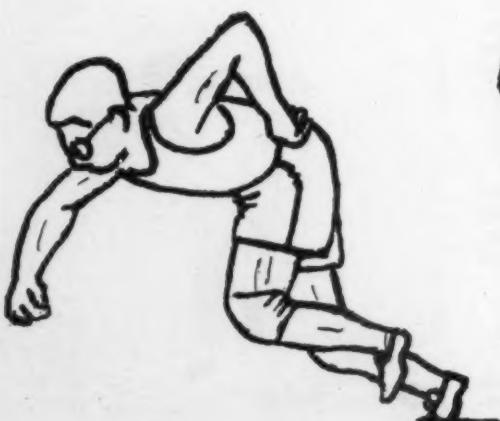
When once under way, the sprinter should have a fairly good high knee-action with a shoot forward on the lower part of the leg, and be well up on the toes. By this method an athlete covers more distance. Many athletes have a tendency to dive for the tape. A sprinter who runs through the tape is more likely to win than one who jumps for it.

Speed An Advantage in All Sports

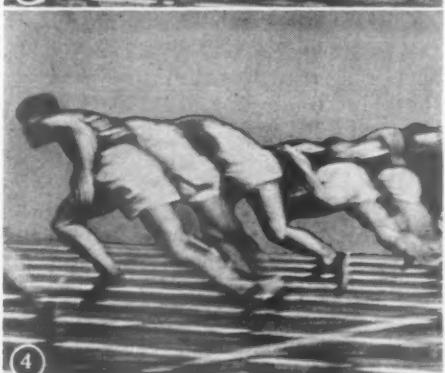
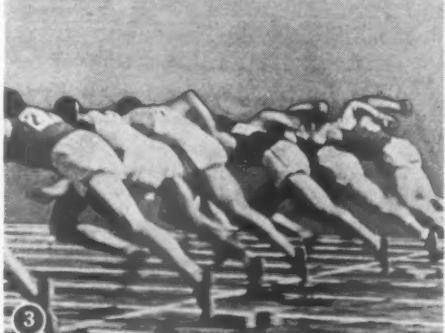
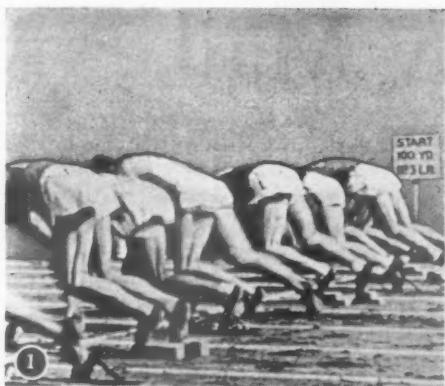
Speed in any athletic event is an important factor. Few football players know how to run and few big league ball players have much speed. An exceptionally fast man is a great help to his team and his own career in any sport.

George Case, the present outfielder on the Washington Baseball Team is rated one of the fastest runners, if not the fastest, in the big leagues. His base stealing record last year was far ahead of any other player. A fellow like Case can beat out many infield hits and greatly improve his batting average.

When Jack Donovan, the ex-Dartmouth hurdler, was competing, his form was
(Continued on page 43)



From Movies on Paper
by David L. Holmes,
copyrighted.



The Start and Finish of the 100-Yard Dash in the 1939 N.C.A.A. Meet

Illustration 1. The third athlete from the left seems to have better distribution by having his feet more spread. The first athlete from the left has his feet too close together. This puts too much body weight on the hands.

Illustration 2. The fourth athlete from the left has an ideal stance, with feet spread apart to allow proper distribution of weight on hands and front foot. The average distribution is about two-thirds weight on the forward foot and one-third on hands.

Illustration 3. Note the third man from the left has a good arm swing. His right arm is in position for a powerful thrust forward.

Illustration 4 shows all the runners with a good forward body bend which permits the athletes to get into their running early.

In illustration 5 note the forward body bend with a good arm drive in the runner at the left (26).

Illustration 6 shows Jeffrey with good running form. While the other runner has poor arm action, and is swinging his chest to the side.

Illustration 8 shows Jeffrey to have relaxed around the shoulders and is now driving along in good shape with good leg and arm action.

Illustration 9. Jeffrey is getting a good forward right leg thrust.

Illustration 10 shows a slight tie-up in the shoulders.

In the drawings on the opposite page, taken from the *Movies on Paper* by David L. Holmes of Wayne University, the first two runners are "picking up" their hands while the last runner is driving hard with his.



A Baseball Clinic by Mail

SEVERAL of the questions recently received for the Clinic-by-Mail column were on the subject of pitching. Hence these will be grouped together under that heading.

Question 1: What should the pitcher do in early training?

Question 2: What fundamentals should be taught a pitcher?

Question 3: What stance should a pitcher take with men on bases?

Question 4: How should a pitcher throw to second base?

Question 5: How much time should a pitcher take to warm up before a game?

Answer 1: A pitcher in the early stages of conditioning should work easily and do considerable running to get his legs in shape. He should also do calisthenics and other exercises to get in proper condition. The boy should throw very easily to a catcher at first, warming up slowly. As his arm gets stronger he can throw harder, but he should throw nothing but straight balls for at least a week. After he has thrown for a week, he can start working on his curve ball. Care should be taken that he does not throw too many curve balls at the start. The pitcher should always be working for control and may be aided in securing this by having the catcher put his glove in various positions as a target. It is a good plan to have a batter stand up at the plate, so that a pitcher will get used to him. After the second week, the pitcher should start working without a wind-up, so that he will become accustomed to pitching with men on bases. He should start also working on his "move" of throwing the ball to first base. Generally it is harder for a pitcher to throw without the wind-up. The length of the daily workout depends on the boy; some can work harder than others. Usually, if a boy works hard one day, he should take it a little easier the next. A pitcher should stop throwing the instant his arm feels

tired and should rest his arm, whenever it becomes sore.

Answer 2: The fundamentals to be taught a pitcher should be as follows: 1. Good control. 2. Fast ball. 3. Curve ball. 4. Change of pace or slow ball. 5. How to field his position. 6. His move to first base. 7. How to watch baserunners. 8. A pitcher should possess courage, temperament and brains.

Every pitcher cannot have all the points listed above, but he should learn his strong points and work hard on them.

By control we mean that a pitcher should learn to throw a ball high, low, inside or outside and should be able to put it over the plate when he has to. The catcher can help the pitcher with his control by always putting his glove in various positions as a target.

The fast ball can be thrown by an overhand delivery, side-arm delivery, or underhand delivery. The boy should throw the ball with the delivery which is most natural to him. The ball should be held with the first two fingers across the seams (or at least across one seam) at the point where the seams are closest together. The thumb should be held under the ball, but not too far under, because the ball should leave the end of the fingers when thrown.

When throwing a curve ball, the pitcher should use the same motion as for the fast ball, except the ball is released over the index finger with a rotating snap of the wrist. The ball is held in the same manner as the fast ball except the second finger should lie along one of the seams, and the thumb should be placed underneath the ball, but not around it. The ball should be held out as far as is comfortably possible toward the ends of the fingers so that the pitcher will get the greatest amount of rotation.

There are different ways of throwing a slow ball or change-of-pace ball such as the finger-nail ball, the knuckle ball and fork ball. These all have the characteristics of the old spit ball in that the ball goes up without spinning. The easiest method of coaching the slow ball is to have the pitcher throw a slow curve, with the same delivery as a fast ball. The ball must be held very loosely and the hand allowed to pull away from the ball. The slow curve is easier to control and not as hard on the arm.

A pitcher must learn to field bunts, to cover first base on balls hit near the first baseman and know when to back up bases.

Answer 3: The pitcher must practice pitching from the position that he will assume with runners on first or on second. The rear foot should be in contact with the pitching rubber and the front foot should be in the direction of home plate,

spread just far enough so that the pitcher feels comfortable. He should not turn his head too far in order to see the baserunner as he must keep the batter in sight at all times. After his stretch, his hands must come to rest in front of him at either the chest or waist. When delivering the ball, he should bring his front foot up fast and down fast so that the baserunner cannot get a running start. The pitcher must step directly to first when throwing to the first baseman.

Courage, temperament and brains are purely individual abilities. Confidence helps a great deal. This generally comes from experience.

Answer 4: There are different ways in which a pitcher may throw to second base, but I believe it is easier for a right-handed pitcher to turn to his right and throw. He should throw with a side-arm motion, at a point on the base closest to third base and about a foot from the ground.

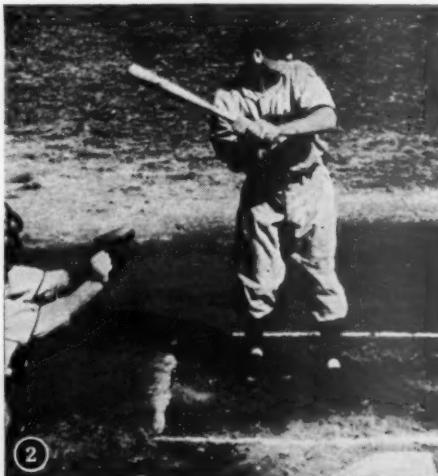
Answer 5: A pitcher, before a game, should take from ten to fifteen minutes to warm up. The time depends on each individual. He should warm up slowly and should throw from a distance never less than sixty feet from the catcher. He should increase his speed gradually, and use only the fast ball until his arm is warm. After his arm is warm, he should throw at full speed and then start using the curve ball. The curve ball should be started slowly and worked up gradually. Just before the game, he should throw at least five or six curve balls and five or six fast balls at full speed.

Question 6: A runner is on first base; the batter hits a ball that looks like a home run; the baserunner runs nearly to third base before he realizes that the ball has been caught by one of the outfielders. Does the baserunner have to follow the base line back to first or can he cut directly across the field?

Answer 6: The baserunner will have to
(Continued on page 42)



14



2

THE ATHLETIC JOURNAL

Morrie Arnovich, Hard Hitting Outfielder of the Phillies an Excellent Example of Relaxation at the Plate.

(Illustrations 1-10)

For the following illustrations, The Athletic Journal is indebted to Mr. Ethan Allen, The Film Bureau of the National League Professional Baseball Clubs, 30 Rockefeller Plaza, New York City.



Illustration 1. Notice the shoulders level, not too close to the plate (so inside balls can be hit well), bat back, ready to hit (off shoulder), weight evenly distributed on both legs.

Illustration 2. The bat is brought farther back, arms are out from body. Notice Arnovich's good style. The bat is as far back as the pitcher winds up, as it ever is. The batter should not "wind up" with the bat. This makes a batsman swing late and an easy target for a fast ball.

Illustrations 3 and 4. Arnovich has begun his shift of weight to the front foot. Notice the foot is not lifted high off the ground.

Illustration 5. Arnovich, his left foot firmly on the ground, begins to swing the bat and begins to push with his right foot, a source of additional power.

Illustration 6. Note that the plane of the bat's swing is level. The drive off the right foot is pronounced in this picture.

Illustration 7 shows the bat meeting the ball. Note the ball is hit *in front* of the body. This puts body weight into the hit and this, together with a powerful leg action, accounts for Arnovich's power.

Illustration 8. Note the continued smooth swing of the bat. Arnovich is beginning to pull his right foot into position for the first step to first base. Note the action of his wrists. They were straight in line with the bat in Illustration 7. Here they have "broken" with the swing, giving the additional driving power obtained from wrist action or wrist snap.

Illustration 9. The right foot is digging in for an actual sprinter's start. The follow-through with the bat is pulling Arnovich into stride.

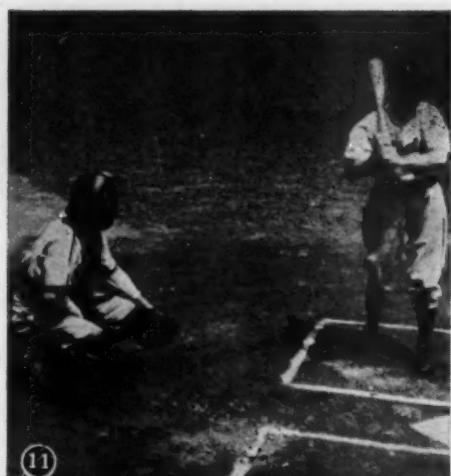
Illustration 10. The bat is literally "left up in the air." It wastes time to throw a bat. Arnovich is off to a fast start.



"Gabby" Hartnett, One of All-Time Greats, Catching

(Illustrations 11-18)

Illustration 11. Notice how well the signals are concealed. The right hand should be against the right thigh, well up in the crotch, the fingers not protruding below the legs. The glove on the left knee protects the signals from the third base coacher.



11



12



13



14

Illustration 12. Note the catcher's stance. The feet are well spread, but not to a "straddle." The catcher is well-balanced. Notice how his fingers are bent on the right hand, and that his thumb is behind his fingers for protection.

Illustration 13. Notice how the right hand is still protected. The weight is still balanced until the position of the ball is determined. The catcher is lining up the ball. Hartnett has badly injured only one finger in eighteen years.

Illustration 14. The ball is passing the batter, but notice the right hand is still partly closed and limp as protection. Notice the right foot is moving to the right. The pitch is to the right over the corner but not a pitch-out. Note that the body is squarely behind the ball. To have every pitch blocked with the body prevents passed balls.



15



16

Illustration 15. The weight has been shifted before the ball is caught. Hartnett is now on his right foot. The throw is always accomplished for right-handed throwers by shifting the weight to the left foot. The weight should be on the right foot when the ball is caught. This is the biggest secret of getting a throw away quickly. Notice that the ball is being caught in the glove with the hand as a trap door, not between the hands, a common fault. The fingers are only opening now.

17

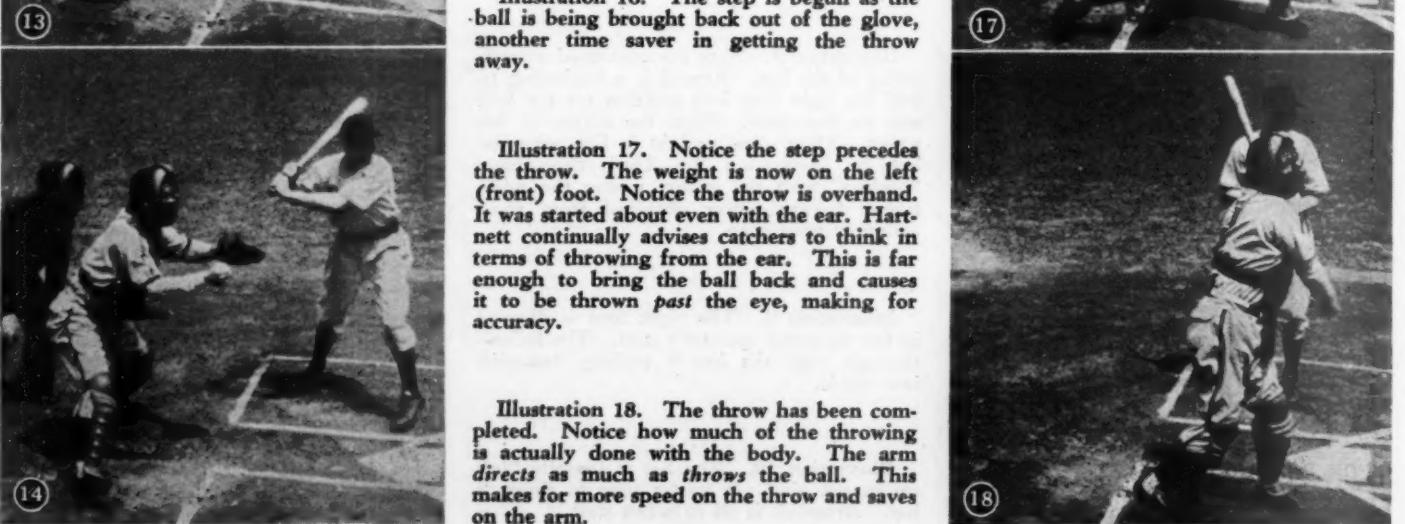
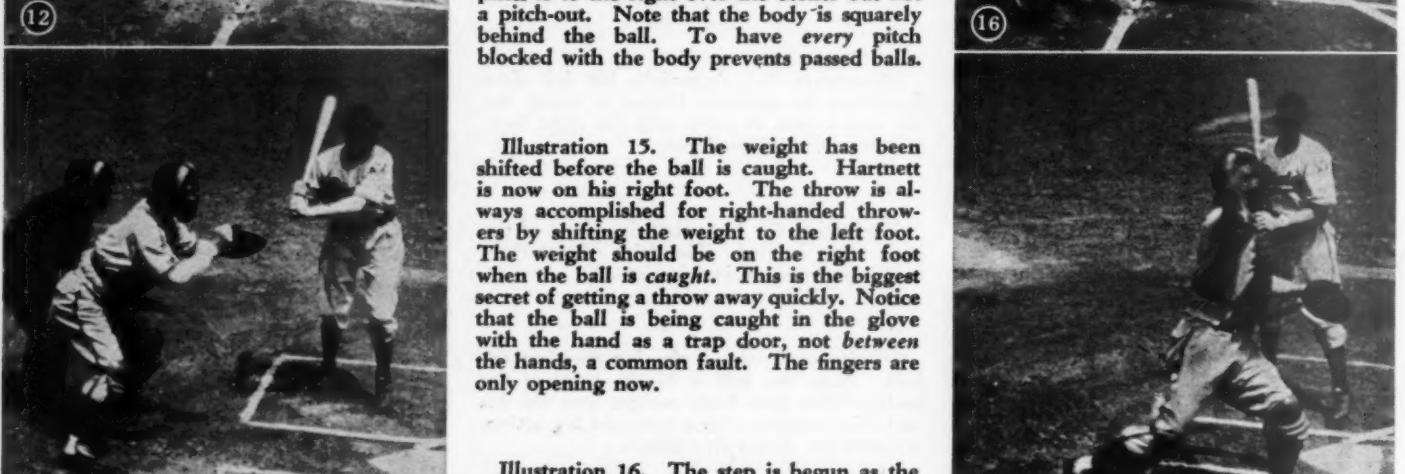
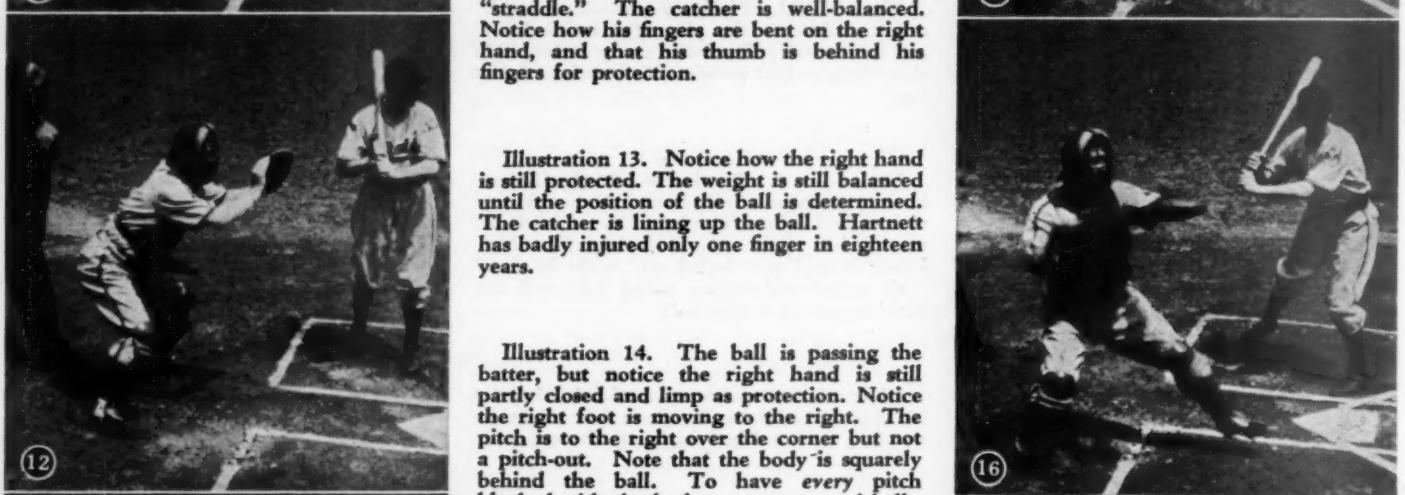
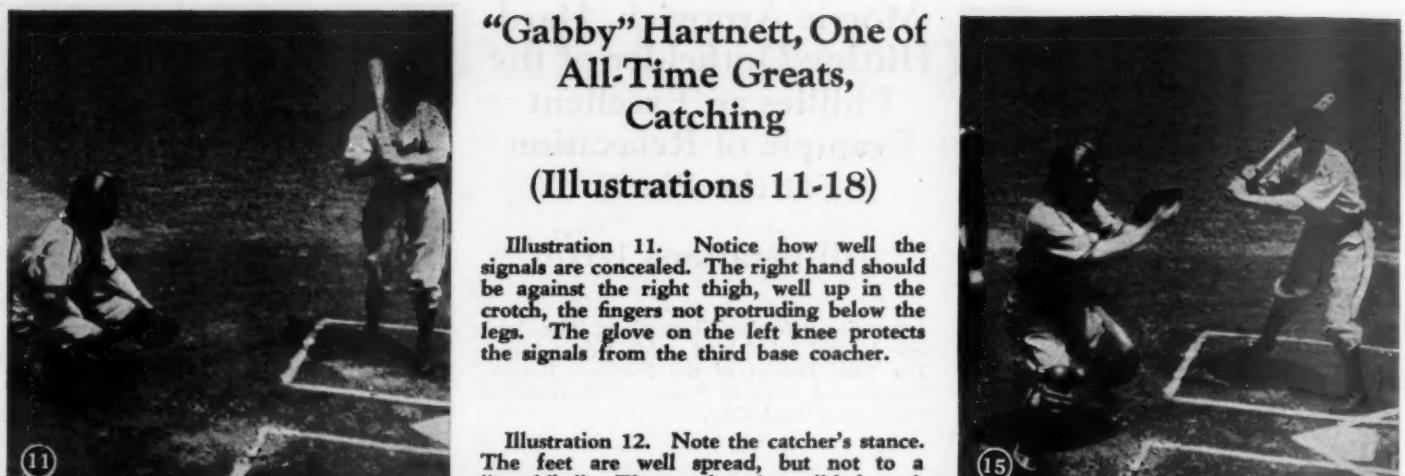
Illustration 16. The step is begun as the ball is being brought back out of the glove, another time saver in getting the throw away.

Illustration 17. Notice the step precedes the throw. The weight is now on the left (front) foot. Notice the throw is overhand. It was started about even with the ear. Hartnett continually advises catchers to think in terms of throwing from the ear. This is far enough to bring the ball back and causes it to be thrown past the eye, making for accuracy.

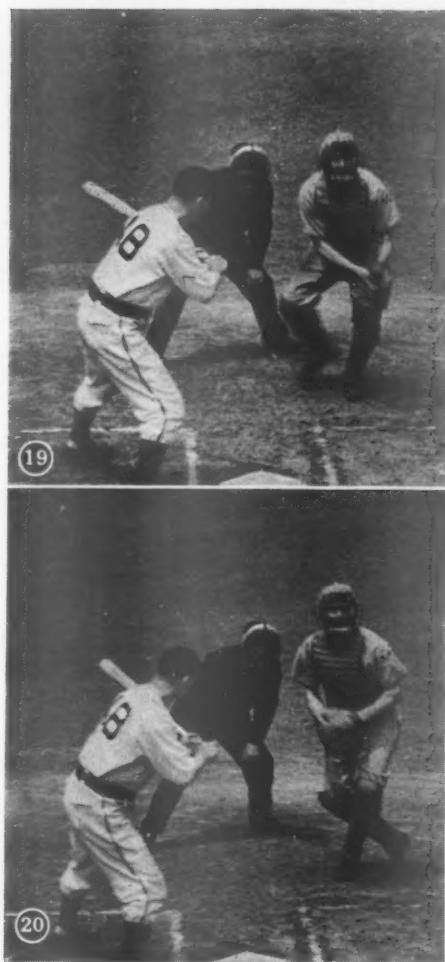
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Illustration 18. The throw has been completed. Notice how much of the throwing is actually done with the body. The arm directs as much as throws the ball. This makes for more speed on the throw and saves on the arm.

16



18



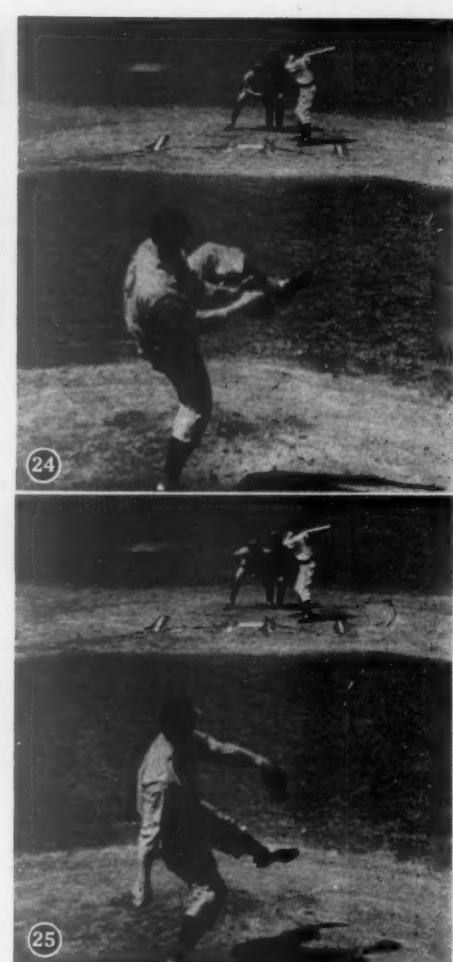
**Harry Danning of the
Giants Throwing to
Second or First With a
Left-Handed Batter
at Bat.**

(Illustrations 19-20)

Illustration 19. He has taken a full sidestep to his left, just before receiving ball. This blocks the ball with his body and enables him to throw in front of the batsman without danger of hitting him or spoiling his vision.

Illustration 20. The weight has been shifted to the left (front) foot. Compare this illustration with 17; the footwork is identical regardless of position of the throw. The throwing is done as much with the feet and body as with the arm. Failure to have the feet in proper position is responsible for slow throws and stolen bases.

Illustration 21. Notice the ball is concealed in the glove, preventing the coacher from determining the kind of pitch. See Answer 2 for description of methods of gripping the ball for different types of pitches. They must be well concealed in this fashion. Notice the smoothness of the swing—no jerk. Jerk is one of the chief causes of sore arms. The right (pivot) foot, not visible in the picture, is firmly on the rubber.



**Proper Pitching Delivery.
Paul Derringer, Star
Pitcher of the Cincinnati
Reds, National League
Champions**

(Illustrations 21-31)

Illustration 22. Notice the sideward rotation of the body to the right, the arm starting down, the left foot starting up.

Illustration 23. The body has turned to the right. Note that the ball is still in the glove as it is brought down. The left foot still going up.

Illustration 24. Notice the body is beginning to lean backward. This is the beginning of a motion similar to drawing a bow to shoot an arrow. It is responsible for much of a pitcher's speed. Good practice to develop it is to stand on the right foot, pivot to the right, try to touch the ground behind where the left heel was before the foot was lifted with the right hand and return to original position without losing balance. Notice the left foot is actually shoulder high for two reasons. Its descent to the ground pulls the body forward to give more speed without an arm effort and it actually puts a moving object in the line of



the batter's vision from which the ball will come (for overhand pitchers only) a moment later, providing a slight distraction of attention. Notice the arm is comparatively straight, similar to the spoke of a wheel with the shoulder as a hub. Do not consciously try to bend the arm at the elbow. This may pull a muscle.



Illustration 25. The arm is now almost straight behind the body. The glove is no longer needed as protection against the coacher as he cannot see through the pitcher's body. The left foot is coming down. The left hand is well in front of the body as a balance.

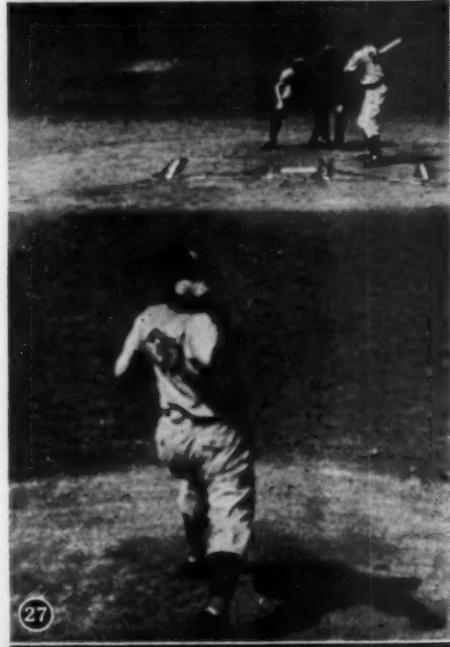


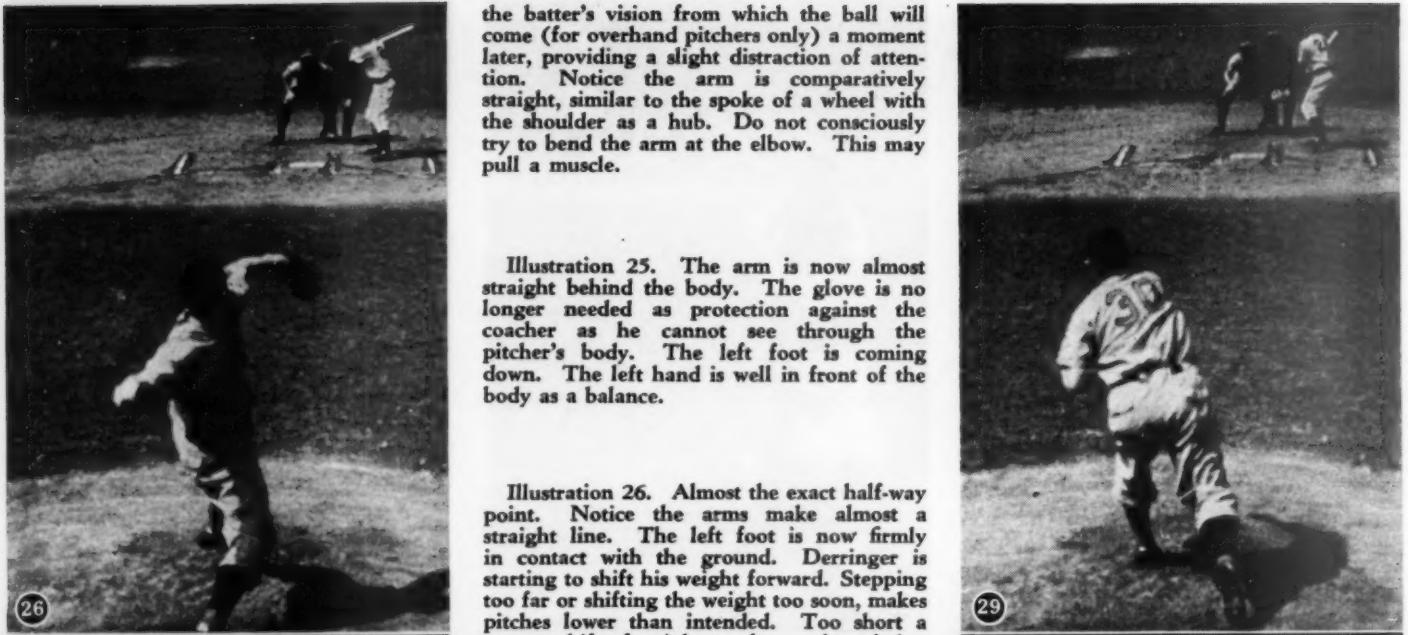
Illustration 27. Notice the forearm makes almost a right angle with the upper arm. This is the arm snap which comes *naturally* at this point. To prove it try to swing your arm in a circle and keep it rigid. It is extremely difficult. The weight of the ball in the hand at this point accentuates this tendency. To straighten the arm (as in Illustration 28) makes the forearm travel faster than the upper arm, hence adds speed and to curves adds "break." Nearly all of weight is on left foot now.



Illustration 28. Notice the arm is straightening out *naturally*. The weight is entirely on the left foot. This makes for smoothness and terrific speed, also for Derringer's noted absence of sore arms despite his terrific speed.

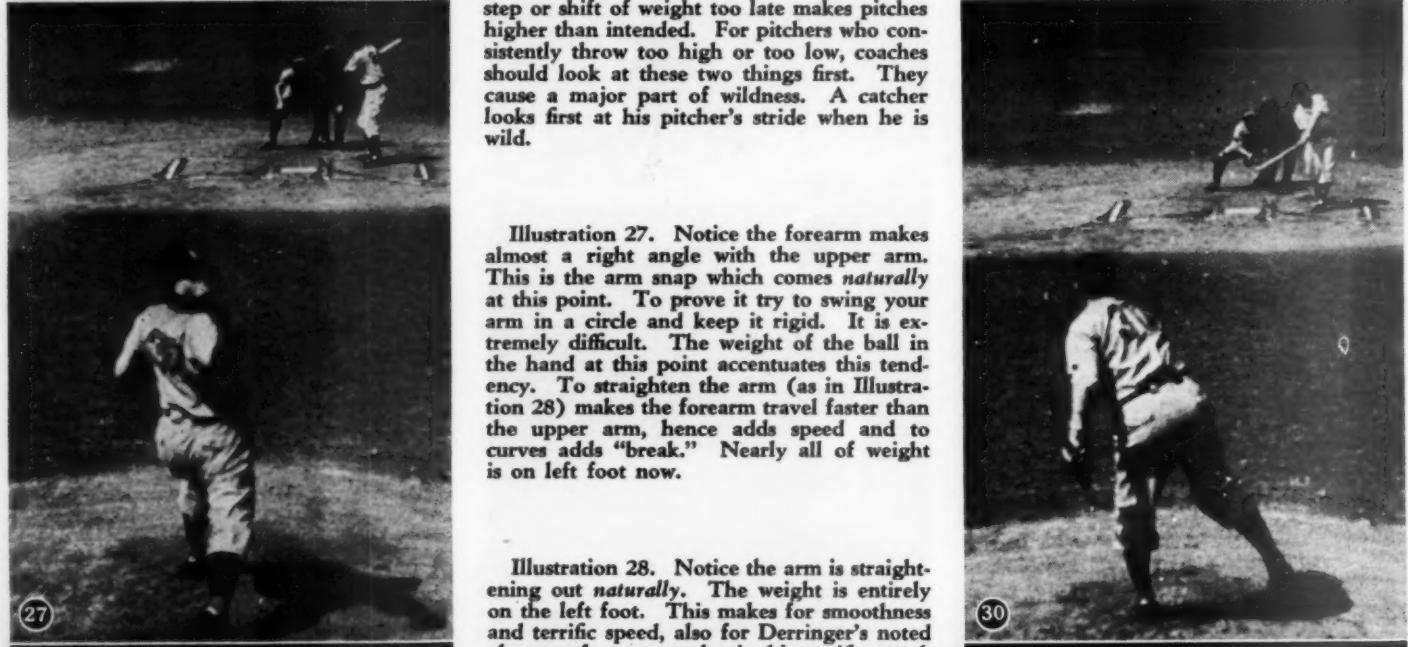
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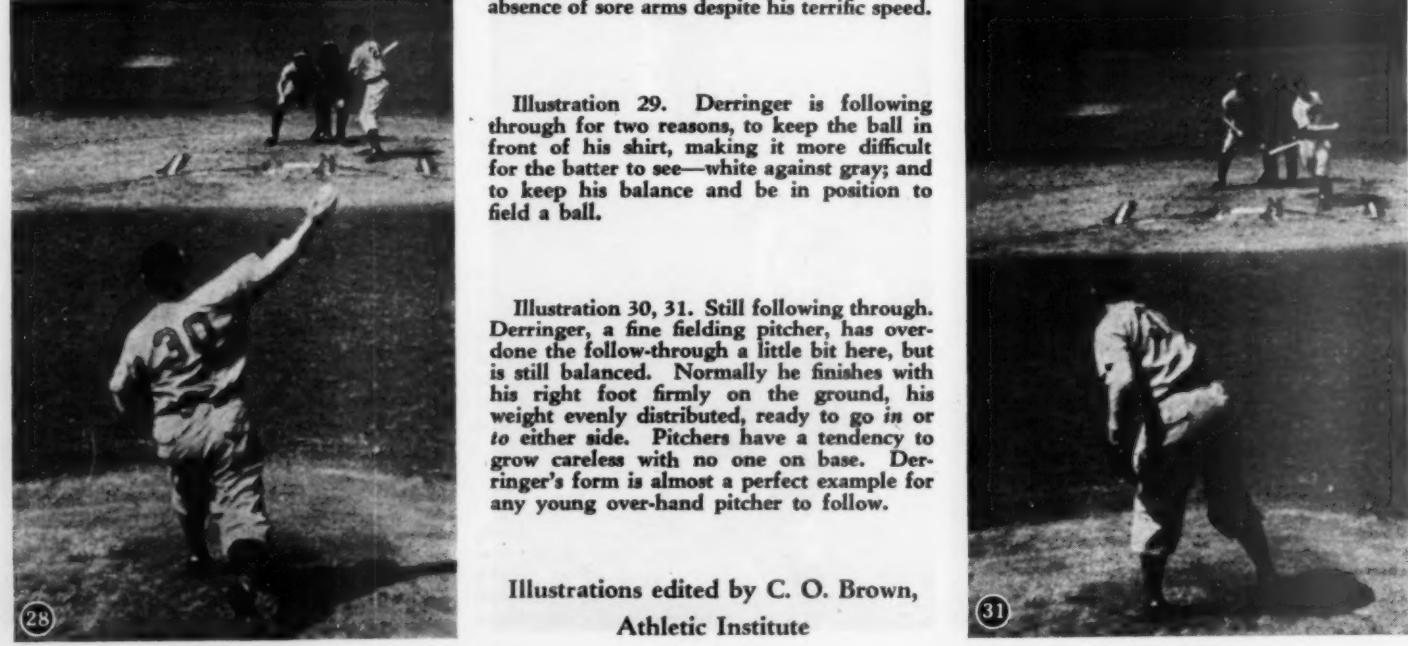
(29)

Illustration 29. Derringer is following through for two reasons, to keep the ball in front of his shirt, making it more difficult for the batter to see—white against gray; and to keep his balance and be in position to field a ball.



(30)

Illustration 30, 31. Still following through. Derringer, a fine fielding pitcher, has overdone the follow-through a little bit here, but is still balanced. Normally he finishes with his right foot firmly on the ground, his weight evenly distributed, ready to go in or to either side. Pitchers have a tendency to grow careless with no one on base. Derringer's form is almost a perfect example for any young over-hand pitcher to follow.



(31)

Illustrations edited by C. O. Brown,
Athletic Institute

High Horizontal Bar

By Hartley D. Price

Assistant Professor of Physical Education, University of Illinois
Varsity Gymnastics Coach; and Director of Gymkana

To the layman, an exhibition of skill on the high horizontal bar may seem amazing. To the experienced coach, the performance, however, of such difficult stunts is the result of steady and consistent practice with proper regard for effective safety procedures.¹ The polished gymnast "flies through the air with the greatest of ease" only after persistent endeavor and perseverance. The gymnast may enjoy his chosen sport during the entire year, whereas participants in seasonal sports may find their activities limited.



Illustration 1. A reverse flyaway from a forward giant swing.

The gymnast may be busy with competition during the winter months, but in the fall, the spring and the summer he may participate in shows and exhibitions. A complete gymnastic program² should include both the competitive and exhibition phases of gymnastics.

The gymnast in order to be successful should know how to learn the various skills correctly and in their right order. The starting point for the learner on the high horizontal bar is first to gain both competence and confidence on the low horizontal bar. As a general rule, the bar should be raised to an intermediate height after the stunt has been learned on the low bar before it is raised to standard

height. The gymnast should use sufficient chalk (magnesium carbonate) to insure a safe grip.

Fundamental Stunts to Be Learned

Fundamental stunts that should be learned on the high horizontal bar are the following: The knee-swing up; backward and forward knee circles (single and double); the backward hip circle; the kip or upstart (ordinary and reverse); the forward hip circle; the back kip, the seat rise; and the uprise (ordinary and reverse, Illustration 5).

The beginning gymnast should strive to master a given trick in good form before he moves on toward the more difficult stunts.

Good Form Is a Requisite

All stunts should be performed in terms of certain standards of good form. Such standards include: 1. Beauty of execution.



Illustration 2. The dislocated giant swing—a difficult move.

2. Smoothness of motion. 3. Poised body throughout movement. 4. Continuity. 5. Unity of movement. 6. Gracefulness. 7. Legs straight, feet together, and toes pointed.

Progression Important

The sequence of stunts should be learned in the correct order of difficulty. With the attainment of the basic fundamentals the aspiring gymnast should strive to achieve mastery of the following stunts: 1. Ordinary giant swing. 2. Reverse giant swing. 3. Other giant swings. 4. Giant swing

change movements. 5. Difficult re-grasps. 6. Difficult dismounts (Illustration 1).

The Ordinary Giant Swing

The ordinary or regular grasp is used in the execution of this stunt. The ordinary giant swing should not be attempted until the aspiring gymnast has acquired all of the fundamental tricks, especially an excellent free hip-circle and a three-quarter giant swing. In the three-quarter giant, the performer should be able to control the swing in the extended position, so that he may attain a support position above the bar.

Before the attempt to master the giant swing, a three-quarter giant should be tried first. From a support position and an ordinary grasp, the performer should swing out to a fully extended position; he then should force his shoulders forward as he flexes at the waist to swing the hips over the bar. In this way he should be able to return to the support position. The performer should try this stunt at first with a small swing. He should gradually increase the pendulum until he is able to swing in a fully extended position. With mastery of the three-quarter giant he is now ready for the giant swing.

Safety Procedures

1. In learning the giant, it is advisable
(Continued on page 29)



Illustration 3. Mount to reverse giant swing in process.

¹ Hartley D. Price, "Safety Procedures in Gymnastics," *Athletic Journal*, Vol. XX, No. 6, February, 1940, pp. 10-12; 45, 46.

² At the University of Illinois, the gymnastic team performs with the gymkana troupe during the fall and spring. The gymkana troupe stages numerous local shows, ten road shows, out-of-state trips and two home-shows annually. During the winter, the gymnasts are busy with the varsity gymnastics team.

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Nation-Wide Amateur Athletics

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JOHN L. GRIFFITH, Editor

Lollipops vs. Learning

RECENTLY there appeared in the *Saturday Evening Post* an article entitled "Lollipops vs. Learning," written by a high school teacher. It is not our purpose to discuss or criticize an educational system as such, but a few points brought out by this teacher are worthy of consideration by all who are interested in the general problem of education.

The basis of the author's contention regarding a well-known theory of education is that the child should not be required to undertake difficult tasks or to study subjects in which he may not be interested. This teacher was quoted as saying, "I sometimes think that the only contact with adult standards of accomplishment, the only real hard work done by my high-school boys, is on the football field — a field not yet invaded by Progressive methods. Football coaches want results. Perhaps that is why none of them has yet taught line plunging in swing time, or adapted Bingo to signal practice."

The Editor of the Chicago Daily News, in commenting on the article referred to, writes as follows: "But even if it can be shown to produce favorable results in specific instances, is the sugar-coating system on the whole advisable? What can't be driven from the mind of the average parent is the surety based upon personal experience, that little worth while in life is gained without a struggle, oftentimes struggle of the most unremitting character, against odds that a capricious fate seems deliberately to render adverse. An indulgent teacher, anxious to make things easy for her class, and incidentally for herself, may try to sugar-coat the bitter pills and smooth the thorny paths, and may succeed. But life will not. The hard world of reality will not even make the effort. Parents who suggest this are accused by some educators of a sadistic and savage recidivism to the age of ferrule, dunce cap and hickory stick, but the accusation is unwarranted. The average parent is neither a military martinet nor a Dickensian bully. He simply can't get it out of his head, poor soul, that school, primarily, is intended as a training ground for life, and that life

is an arena where punches are seldom pulled."

The question arises as to whether a child who has always followed the easy way of doing things will be better qualified for life's battles than the one who has had to overcome obstacles. The high school teacher who wrote the article in the *Saturday Evening Post* was right in her thesis that the boys on the football squad have to do real hard work and that the football coaches know that there is not an easy road to success on the gridiron. This is one reason why athletic training for the average boy is desirable in this soft age when so many are trying to find a pleasant road to Utopia.

Athletics in a Disordered World

THE Finnish director of the Olympic Games which were scheduled to be held in Helsinki this summer, when asked about the Games was reported as saying, "In a house of mourning we do not speak of festivals. The world is not good enough for athletics."

Attention may be called to the fact that the fair-play spirit of sports does not prevail in international relationships of the moment. When countries are at war, all of the rules of the game are violated. Today those who are administering the affairs of the leading nations, almost without exception, have abandoned the rule of reason and international comity and are reverting to the old principle based on the theory that might makes right. Certainly athletic competitions, which make for better understanding and recognize the rights of all the competitors, seem out of place in the world of today.

Some people speak of politics as a game. This is a gross libel on athletics. Politicians, generally speaking, violate all of the principles of fair play. Only too often they make promises which they never intend to keep. They pass laws which they maintain are intended to operate for the good of the people, when the laws were suggested and passed for ulterior reasons and with the hope that they would add to someone's political fortunes. Government shouts to high heaven about the iniquities of the economic order and then practices the same iniquities itself.

Perhaps Galsworthy was right when he said, "Sport, which still keeps the flag of idealism flying, is the only saving grace in the world of today. Sport respects the rights of the adversary, whether the game is going for or against." Perhaps this is what the Finnish gentleman was thinking about when he said, "The world is not good enough for athletics."

Amateur athletics at their best exemplify the finest virtues of the race. Modern politics as well as modern war represent age-old vices. The sad part of it is that the public is not shocked when graft or chicanery on the part of public officials is exposed, in the same way that it is shocked when charges are made against amateur athletics. This seemingly indicates that the public thinks corruption is a part of modern polities, but that corruption in athletics is unusual.



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Chemical Weed Control as an Aid in Renovating Turf on Athletic Fields

Dr. Fred V. Grau
Agronomist Pennsylvania State College

ATHLETES want a deep, firm resilient cushion of turf on which to fall. Fewer casualties result when, through correct management practices, this objective is attained. This safety factor is difficult to achieve when weeds are present because they compete with the grass and offer little resistance to punishing play. Officials of many athletic fields in Pennsylvania have appreciated the practicability of employing chemical weed control as one inexpensive step in the renovation of thin weedy turf, and have been practicing it for several years with gratifying results.

It is possible to produce a nearly weed-free turf where it does not receive the severe punishment that occurs on turf used for sports. Corrected soil conditions, intelligent liming and fertilization practices, and proper height of cut will crowd most weeds out of existence by competition alone. Where turf is regularly and severely injured by abuse, especially where a field is used for practice and for regular games, it is only natural that the weakened grass will permit the invasion of weeds. Once these unwelcome invaders have gained a foothold, it requires diligence and persistence to rout them sufficiently so that a solid turf can again be established.

Since prevention is worth a pound of cure, the following suggestions are listed as factors which, if followed, will aid greatly in maintaining a solid turf:

1. Establishment and maintenance of a practice area so that the main playing field may be reserved only for games and for special occasions such as parades, commencement exercises, and the like.

2. Establishment and maintenance of a small sod nursery close to the field so that major injuries to the turf can be quickly and effectively repaired by resodding.

3. Placing the responsibility for having good turf in the hands of a capable ground keeper who is familiar with the maintenance of turf. The outstanding example of this suggestion is the green keeper on a golf course who must be thoroughly conversant with all phases of turf management in order to keep the course in condition.

4. Providing the ground keeper with equipment indispensable to the maintenance of turf. Many fields are seriously

handicapped by lack of proper tools.

5. Providing a definite sum in the an-



Illustration 1—Knapsack sprayer is useful for spraying weeds.



Illustration 2—Chemicals mixed with fertilizer may be applied by hand or with a spreader.

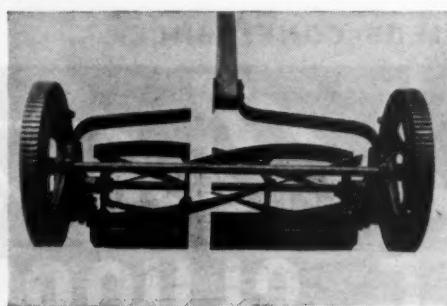


Illustration 3—Height of cut is important. This mower for lawns is set at one and one-half inches. For athletic fields the height should be three inches.

nual budget for the upkeep of the fields. A playing field represents an investment that, to be protected adequately, deserves a proportionate share of expenditures for annual maintenance and, above all, it represents an investment in the health and safety of the boys and girls who use the fields.

The suggestions above may seem to have little relation to weeds in turf, but inattention to such details are the very reasons why there is so much need for information on weed control. Many new fields are being established each year by federal grants at costs for labor alone ranging upwards of \$65,000. To turn a \$65,000 business over to a low-salaried clerk would hardly fit in with a business man's conception of policy. By the time an additional outlay has been made for establishing turf, for bleachers, and for everything necessary for play, the initial investment may easily exceed \$100,000. By placing responsibility for such an investment in the hands of a capable ground keeper, the need for all other suggestions becomes nil.

The material contained in this article is designed to aid the ground keeper who may not have had an opportunity to become acquainted with the details of weed control.

The most common and the most troublesome weeds of athletic fields in Pennsylvania are: Crab grass (*digitaria sanguinalis*), a summer annual which reproduces by seeds. Knotweed (*polygonum aviculare*), a summer annual which reproduces by seeds. Dandelion (*taraxacum officinale*), a perennial which reproduces by seeds. Broad-leaf plantain (*plantago major*), a perennial which reproduces by seeds. Dock (*rumex spp.*), a perennial which reproduces by seeds. Narrow-leaf plantain (*plantago lanceolata*), a biennial which reproduces by seeds.

Mat weeds. In this classification may be all those which reproduce solid mats that smother the grass. They reproduce by seeds and by stolons and are perennial in habit. Among them are the chickweeds (*stellaria spp.*, *cerastium spp.*), self-heal (*prunella vulgaris*), the speedwells (*veronica spp.*), English daisy (*bellis perennis*) which is uncommon in sports turf.

With the exception of the mat weeds, it is apparent that the weak point in the

(Continued on page 38)



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FOOTBALL EQUIPMENT

The 1940 Basketball Championships

ARIZONA

Frank Brickey

Union High School, Duncan

THREE teams are selected from each of the five districts in which Arizona is divided to represent that district at the state basketball tournament. One other team is selected from the state at large, making a total of sixteen teams. The tournament is sponsored by the University of Arizona at Tucson. Tournament play started on Thursday afternoon and continued until Saturday night for the final games.

Four qualified officials were engaged to work all games: L. Chard of Bisbee; W. Lane of Miami; A. Beard of Jerome; and B. Davis of Phoenix. In justice to these men it must be stated theirs was a hard job and they carried out their duties in a splendid spirit of co-operation, sportsmanship and impartiality.

The final game found Duncan, the defending state champions for 1938 and 1939, meeting Tucson. Tucson met Duncan in 1938 in the semifinals and again in 1939 in semifinals. Duncan won both times so the final game this year was a natural for good, clean rivalry.

Tucson used a man-for-man defense. Offensively, Tucson relied upon Sam Stevens for many of their points. Stevens is six feet, ten inches tall and is quite active for a large chap. Riddle and Rey of Tucson, however, were as valuable due to their clever ball-handling and accuracy in hitting long shots.

Duncan defensively used a tight shifting zone which held their opponents' scores down considerably. Offensively, Duncan varied the style of play to meet the conditions, using a fast break, screening and slow deliberate execution of plays. The latter was used the majority of the time.

In reaching the finals, Tucson won over Phoenix, Wickenburg and Miami. Duncan won over Clarkdale, Mesa, Morenci and Tucson.

Just as the Duncan-Tucson game was a natural so was it a thriller. Tucson took a lead from the first and maintained it until thirty seconds remained to play. At the start of the third quarter the score was 27-17 in favor of Tucson. Duncan held Tucson to two points the fourth quarter and made fourteen themselves. The score was tied at 29 when the clock showed twenty-nine seconds left to play. With four seconds to play O'Dell of Duncan sank a long shot from mid-court near the side line for the winning basket and



Frank Brickey



James Barclay



R. A. Newell



J. A. Grimsley

FOR the third consecutive year, Duncan Union High School won the Arizona state basketball championship. Mr. Brickey attended Arizona State Teachers College from 1929-1933 and served as line coach there in the fall of 1934. Later that year, he became coach of all sports at Duncan High. Next fall Mr. Brickey returns to Arizona State Teachers College as head basketball coach.

ANOTHER high school to win its second time in succession was Northern High at Flint, Michigan, winner of the Michigan Class-A tournament. Mr. James Barclay, the coach, was graduated from Michigan State Normal in 1926. During the thirteen years that he has been at Northern High his basketball teams have had an enviable record: runner-up once; four times state champions; six times regional champions; seven times Saginaw Valley League champions and ten times city champions.

IN his first year as coach at Sherman Township Rural Agriculture School at Weidman, Michigan, R. A. Newell's team won the 1940 Class-D tournament in the Lower Peninsula. In the thirteen years of Mr. Newell's coaching, his teams have been successful, winning over 80 per cent of their games.

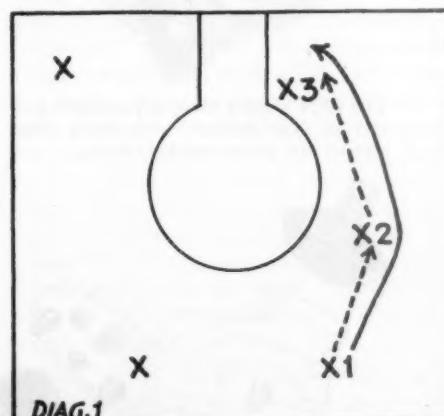
the third consecutive state title. The final score was Duncan 31, Tucson 29.

In winning the third straight championship, Duncan was fortunate in having three veterans from last year's team. Captain Gene O'Dell was by far the most outstanding player of the tournament. O'Dell won two games by sinking baskets with less than ten seconds to go. In the semi-final game Morenci and Duncan were tied at 24, with ten seconds to go. O'Dell shot a corner shot for the winning points. Likewise O'Dell shot the winning basket in the Tucson game, with four seconds to play. O'Dell was ably assisted by Fred Arnett and Joe Gonzales from last year's team and Bourgeois and Hamilton who came on this year.

The University of Arizona officials deserve to be complimented for the splendid way the tournament was conducted. The gate receipts for this year's tournament showed an increase of 23.8 per cent over last year's, and as might be expected, the attendance was an all-time high.

Duncan is second only to Mesa in winning three consecutive years, Mesa having won in 1923, 1924, 1925 and 1926.

A play used by Duncan to good advantage is shown in Diagram 1. X1 passed to X2. X2 retained the ball until X1 had driven by on the outside and in close to the basket. Usually the man guarding X1 relaxed. Then X2 pivoted to the outside and threw a high pass to X1 under the basket. X3 screened very effectively for X1.



DIAG. 1

MICHIGAN

Class A Tournament

James Barclay

Northern High School, Flint

MICHIGAN High School basketball in 1940 was different in two respects
(Continued on page 32)



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Style 89—Game shoe of Yellowback Kangaroo—soft toe—buffed sole—equipped with No. 4 cleats. Goodyear welt construction.

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Style 77—Upper of Athletic Tan leather which is very tough and pliable and will withstand perspiration. Goodyear welt construction, ten eyelets high. Split shank soles of good grade Oak Tan leather. Equipped with No. 4 cleats. A good game shoe.

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School Price.....\$7.50



Style O—One of our old standbys with the larger high schools. Made of the best grade of Ath-Tan leather. Is a shoe of excellent quality. Is light, durable and a shoe we can recommend without reservation. Equipped with No. 1 cleats. Goodyear welt construction. School Price.....\$6.50

Style OX—Same as O only has soft toe. School Price.....\$6.50



Style X—A very sturdy shoe. Made throughout of a good grade of Athletic Tan leather. Soles are of good Oak leather. By all odds, the best shoe made within this price range. Has No. 1 cleats. Goodyear welt construction, nine eyelets high.

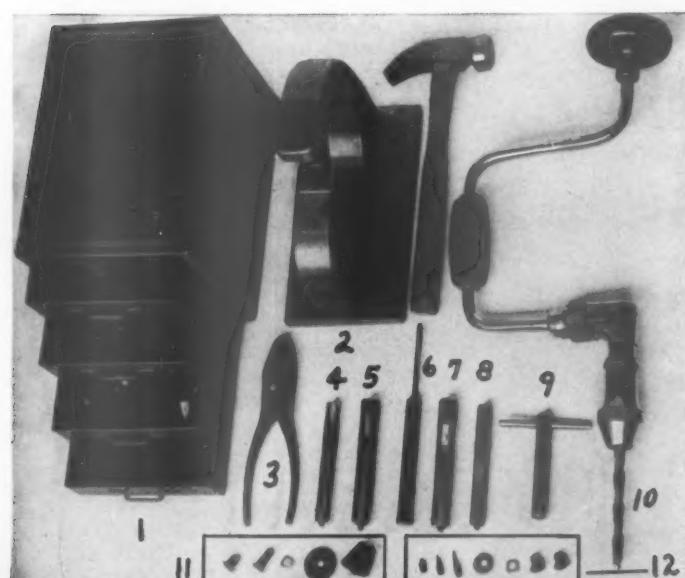
School Price.....\$5.50

Style XX—Same as X only has soft toe. School Price.....\$5.50

The House of Riddell has had 18 years' experience with female cleats and fixtures and 13 years' experience with the male cleat construction. Our shoes can be had in either construction. Our long experience is your safeguard and protection.

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School Prices



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Cleats No. 4, Female, per set of 14 in bag.....	.20
Cleats No. 5, Mud—Male, per set of 14 in bag.....	.25
Cleats No. 5, Mud—Female, per set of 14 in bag.....	.20
Laces, gross.....	4.50
Fixtures, complete (Male or Female Set-up).....	.05
Pliers.....	.25
Cleat Wrench.....	1.50
Cork Soles, pair.....	.09
Sole Plates, pair.....	.24
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Repair Kit—This Repair Kit Can Be Used for Both Male and Female Cleats.

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A light basket ball shoe in colors for game use. Made up special, requires 3 weeks.

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THE BALL THAT WILL NOT MAKE THE COACH CHASE

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Style NX—A track shoe long needed to meet the demand for a more durable practice shoe. It is of genuine Goodyear welt construction. Has full sole which keeps upper from wearing out at heel. We believe this is the toughest track shoe made.....\$4.20



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Style K—A very strong shoe of welt construction. Highest grade oak soles. Made of Athletic Tan leather. Two spikes in heel.....\$5.50



Style KX—Same shoe as Style K except it has uskide heel with no spikes in heel.....\$5.50



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The soles of the shoes are reinforced with a steel plate. The fixture binds the sole together in such a way that the spikes cannot punch up into the foot.

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.....	9.25
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.....	7.50
.....	6.50

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KP—Pole Vaulting Shoe like K only high top, one spike in heel.....
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JX—Cross Country same as J only has uskide heel with no spikes.....
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Repair Kits complete for football and track shoes.....	10.00	Fixtures complete.....	.07

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Pitchers' Toe Plates, attached to shoe, full cap aluminum, each.....	1.00
Pitchers' Toe Plates, loose, leather, each.....	.38
Pitchers' Toe Plates, loose, full cap aluminum, each.....	.60

1259 N. Wood Street John T. Riddell, Inc. Chicago, Illinois

High Horizontal Bar

(Continued from page 19)

for the performer to have two spotters below the bar. He should try to do the entire swing, but if he does not have enough momentum to go over the top of the bar, he should retain his grasp and as he returns on the downward swing, the spotters should stop his momentum below the bar. If he is not stopped in this way, he would not be able to hold his grasp since he has the wrong grasp to be traveling in that direction.

2. The safety belt may be used and should be wound around the bar so that it unwinds as the performer tries the giant swing.

3. The gymnast should know various skills, so that he will know what to do if the giant swing is not completed. (a) He may flex at the waist and may shift his grasp. (b) He may turn to the right or to the left by releasing one hand and pivoting on the other. (c) He may re-grasp and be ready to try an ordinary giant swing in the opposite direction. This is of

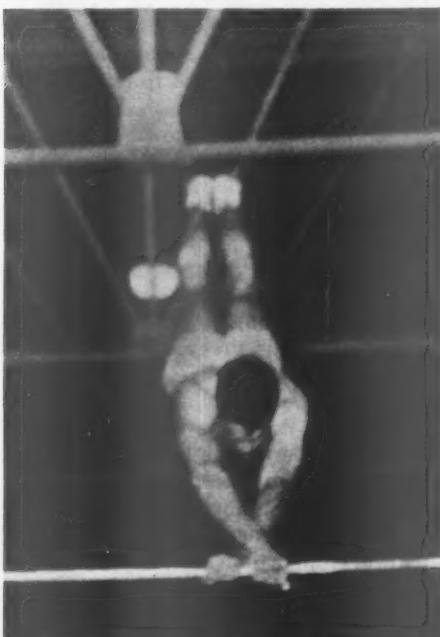


Illustration 4. Cross grip, half turn to forward giant swing.



Illustration 5. The throw-out for a free hip circle to backward giant swing.



Illustration 6. Full twisting cross change.

importance to the competitive gymnast; he should be able to continue with his routine if he happens to miss on an ordinary giant swing during the performance of his routine.

4. The ordinary giant swing should be spotted carefully for several weeks.

The Reverse Giant Swing

The reverse or underhand grasp is used in the stunt. The gymnast should have mastered the handbalance and the reverse uprise before he is ready for the reverse giant swing. From a support position and with a reverse grasp, he should swing up to a handbalance position. When the body is about to proceed downward, he should tuck his head and he should hold a fair arch. On the upward swing the body should be whipped either by the forcing of an arch into the lower back or by a fast hip movement. The performer should gradually develop this hip-snap which is essential for control of the reverse giant swing.

Safety Procedures

1. Spotters should be stationed carefully in order to meet any situation that might arise.

2. The safety belt should be used with the beginner. The belt should be arranged, so that the performer will be properly guarded at the end of the downward swing where he is most likely to release his grasp.

3. Skills should be so learned that the performer may know what to do, if he

does not complete the giant swing. He should learn to do a reverse uprise so that he can assume a support position after the reverse giant swing.

Other Giant Swings

The eagle swing or dislocated giant swing. For this stunt, the grasp differs entirely from the grasp required for the ordinary or reverse giant swings. Instead of the thumbs being pointed inward, they are pointed outward. Illustration 2 shows how the performer goes into this tuck.

With a reverse grasp, the gymnast should throw backward to an outstretched giant swing from a seat position on top of the bar. He should then return to a seat position on the bar.

Giant Swing Change Movements

1. From a hang, free backward pull over to a handbalance into an ordinary giant swing (backwards).

2. From a hang, kip with an ordinary

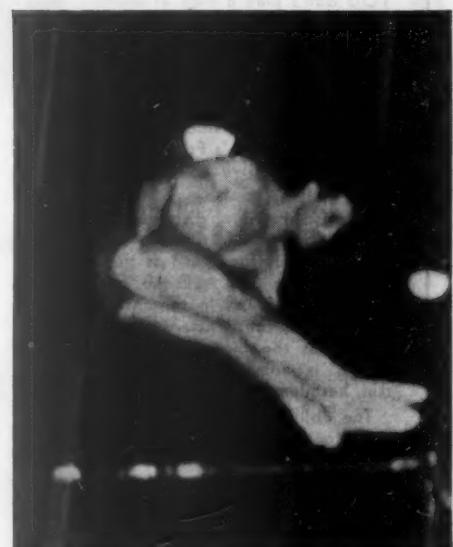


Illustration 7. A flank vault, re-grasp.

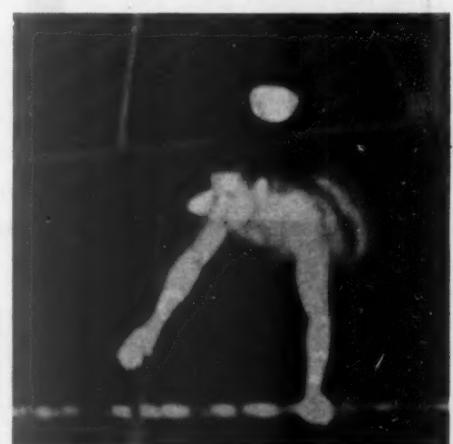


Illustration 8. The Olympic mount—flank re-grasp behind.

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grasp, throw backward into an ordinary giant swing.

3. From a support, a free hip circle backward into a giant swing (Illustration 5).

4. From a pendulum swing and with a reverse grasp, free-hip-swing up and drop into a reverse giant swing (Illustration 3).

5. From a hang, kip with a reverse grasp, handbalance and drop into a reverse giant swing. After mastery of the ordinary and reverse giant swings, the performer should learn methods of changing from one kind of giant swing to another.

6. From the reverse giant swing, a half turn, to the ordinary giant swing.

7. From the ordinary giant swing, the performer may make a quick half turn and release one hand just before going over the top of the bar. In this way, he should be ready to go into a reverse giant swing.

8. The cross change from ordinary to a reverse giant swing (Illustration 4).

9. The reverse giant swing, a half turn (movement 6) but into a cross change grasp. A full twist thus will have been executed upon the completion of the cross change back into the reverse giant swing.

10. From a reverse giant swing: (a) Heel circles and out into giant swings. (b) Sole circles and out into giant swing. (c) The uprise and changing of hands to ordinary grasp into a hip circle. (d) Forward sole circles, release near the top of bar; backward sole circles, ordinary giant swing.

Difficult Re-Grasps

1. The uprise and the flank vault to a re-grasp by making a half turn toward the bar (Illustration 7). The uprise may be executed with an ordinary, a reverse, or a mixed grasp.

2. The uprise with reverse grasp, flank vault, and re-grasp with the hand that is released as the body passes over the bar (Illustration 8).

3. At the handbalance position in the ordinary giant swing, the performer releases one hand and a reverse grasp is obtained. In this change the hand grasps to the outside of the other so that a cross mixed grasp is obtained. During the downward swing, a half turn is executed. The upward swing is then the execution and completion of the movement described in 7 under Giant Swing Change Movements.

Difficult Dismounts

1. The stunt just described may be used as an excellent dismount if the gymnast does not use the re-grasp. In this case only one hand re-grasps and the dismount may thus be controlled.

2. From an ordinary giant swing: (a) Flyaway. (b) Flyaway with twist. (c) Double flyaway.

3. From a reverse giant swing: (a) Reverse flyaway (Illustration 1). (b)

Reverse flyaway with twists. (c) Sheep vault. (d) Front somersault over the bar from forward giant swing.

Many of the routines on the high horizontal bar may be developed for various combinations of the stunts that have been mentioned above. Patience, determination, and courage must prevail if the gymnast is to become a masterful performer on the high horizontal bar.

Helpful Hints

1. The gymnast should realize that he may make great improvement if he tries to help his team mates. It is a wise old axiom that stresses that we learn a little from our teachers but more from our class mates.

2. Distractions should not occur. The gymnast should concentrate on the job at hand, in order to produce the best results.

3. The gymnasium should be well-lighted and should be equipped with adequate safety belts, mats, etc.

4. The performer should depend upon the safety belt as little as possible. He should use it to try a new trick but should dispense with it as soon as wisdom dictates.

5. The performer should not hesitate to use spotters until he has gained complete mastery of a stunt.

6. The performer should use sufficient magnesium carbonate to meet his particular needs.

7. The performer should take proper care of blisters.

8. Straps on the hands should be used sparingly.

9. The performer should use sound judgment in his practice. If he is tired he may injure himself.

10. The performer should not practice on the day preceding a gymnastic meet.

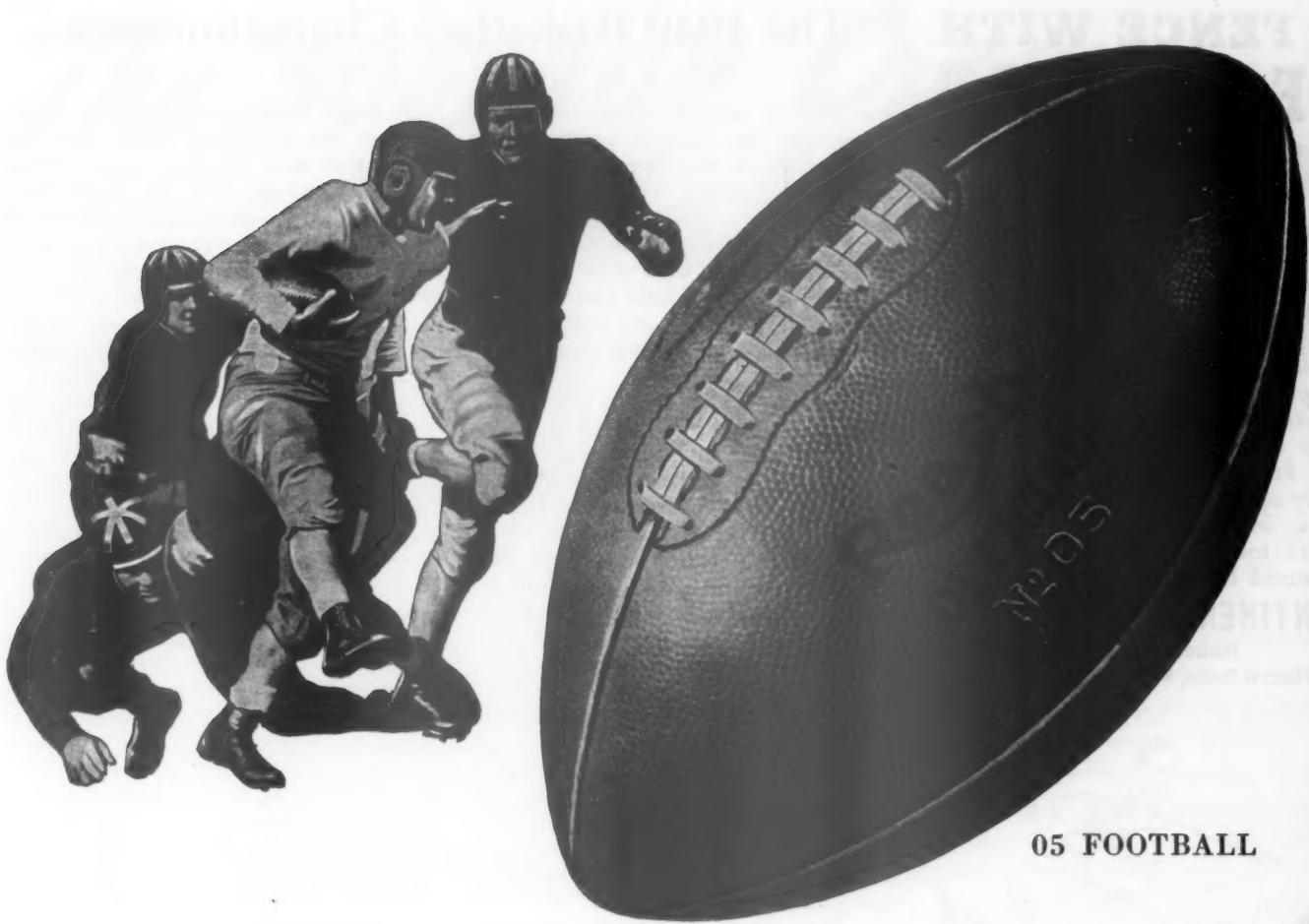
11. The performer should master routines for gymnastic meets about two months previous to competition.

12. The gymnast should avail himself of every opportunity to improve himself by appearing in exhibitions and demonstrations. A crowd affords a stimulus and provides an opportunity to develop self-confidence.

The author again wishes to acknowledge the assistance of Paul Fina and other members of the University of Illinois Gymkana Troupe in the preparation of this series of articles.

In the fifteen articles written by Mr. Price during the last four years on different phases of gymnasium activities, we believe that the most important subjects have been covered, both for elementary and advanced teaching. The subjects of tumbling, handbalancing, pyramid building and apparatus work have been presented with a continuity that should have been of value to instructors in planning their courses.

Editor's note.



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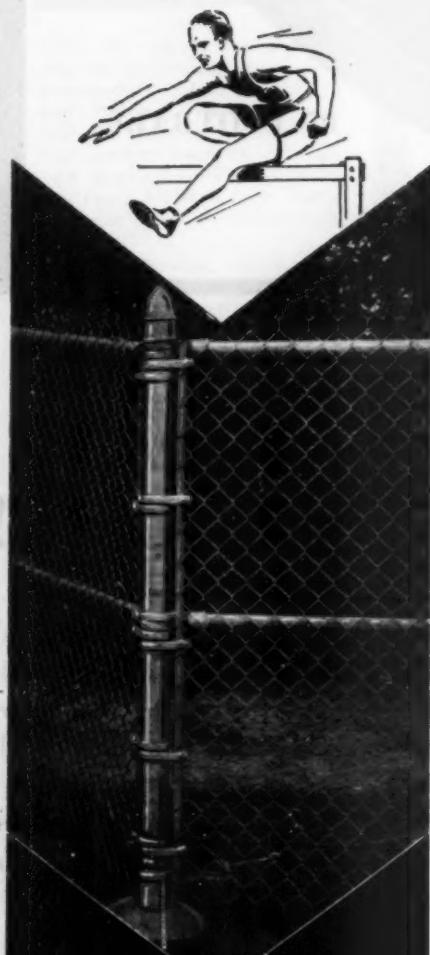
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The 1940 Basketball Championships

(Continued from page 24)

from previous seasons. First: In Class-A competition the stronger teams of the state seemed to be concentrated in one section, the Saginaw Valley League, as three of the eight finalists were from this league. Second: There were more teams composed of large boys than in former years. Five or six of these Class-A teams had players who averaged well over six feet, with one team flashing a center, six feet, eight inches in height.

The season of 1940 will be remembered as an unkind year to defending champions, only one champion of 1939 successfully meeting the challenge of the 700 contesting schools. Flint Northern in Class A won the title for the second successive year, its fourth championship since 1933. In defeating Fordson 28-17 for the championship, Flint Northern went through the season undefeated, and established a twenty-nine-game winning-streak. This is the second time in the history of the Michigan High School Basketball Tournament that a team has won the title twice in succession. The last time was in 1925-26 when Detroit Southeastern, coached by Walt Draper, accomplished the feat.

Flint Northern's 1940 champions might be considered a veteran team although two regulars of the 1939 champions were missing. The two players, however, that filled these positions were very important members of the 1939 team. This year's team was made up of the smallest players that have ever won a championship for Northern. The players ranged in height from five feet, eight inches to the center who was six feet, two inches.

The Flint Northern players made up in other ways for what they lacked in height. They were good passers, and their accuracy in the operation of this fundamental allowed them to develop a very smooth passing attack. Under the backboards their aggressive rebounding, although most of the time the players got only one hand on the ball, was outstanding and added much to their offense.

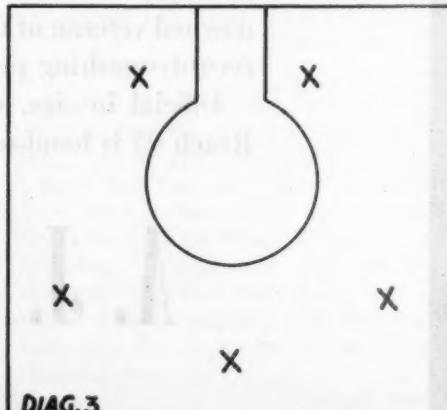
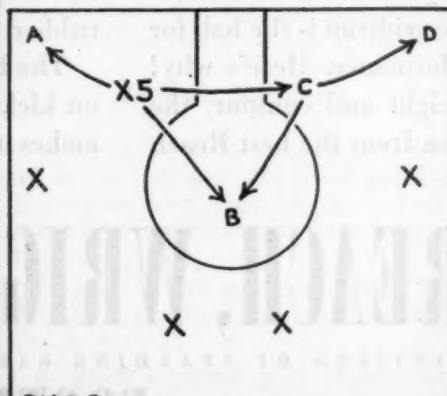
A man-to-man defense was employed all the time, but the manner in which it was

put into effect was very convincing. Against the good, big teams Northern checked all over the court, never letting the opposition get set to the point where the opposing players could take advantage of their height. Against teams with players their own size, Northern players dropped back to the defensive court, and were content to play a conservative game. At other times when the game was going in favor of the opposition they came out of the conservative type of defense and started checking all over the floor, in a most aggressive manner, some times two, or even three men tying up the man with the ball. During the season they had built up the feeling among the teams opposing them that anything might be expected from Flint Northern defensively.

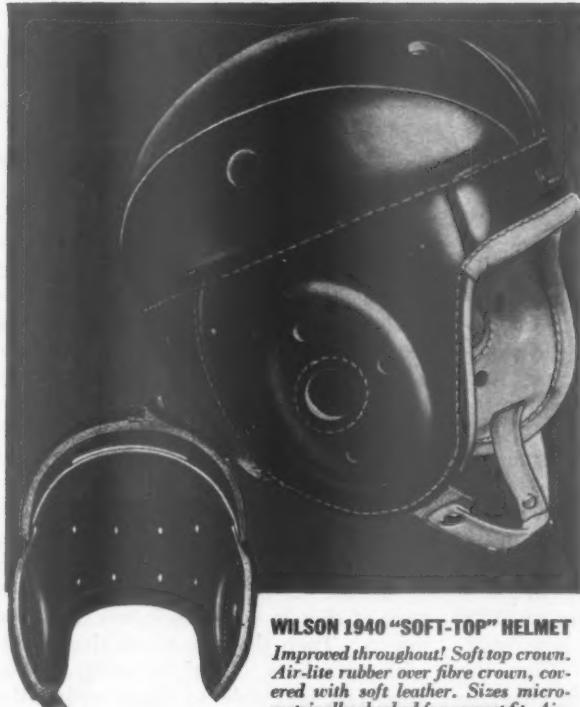
Offensively, as in the past, Flint Northern leaned to the set style of play, using single-pivot and double-pivot formations. The factors that helped them decide what formation they would use was size of court, the defense used by the opposition and their own defensive assignments. The players switched from one formation to the other during the game as they saw fit. Their judgment in making this switch at times during the season was sound, and especially in the final game against Fordson, it helped one player cover a very difficult defensive assignment successfully.

Since the team was made up of experienced and veteran players, frequent use was made of the fast break. In one important game during the regular season, the players relied altogether on the fast break during the entire game, to score forty points against a strong opponent. All these factors gave this team more variation both on offense and defense, and served them in good stead in going through the season undefeated to win their fourth state championship.

Mr. C. E. Forsythe, Michigan's able state director, his committees, and the officials of the tournament, deserve praise for their successful and business-like administration of the tournament. From every angle this tournament was "tops," and



The "SOFT-TOP" Crown Football Helmet

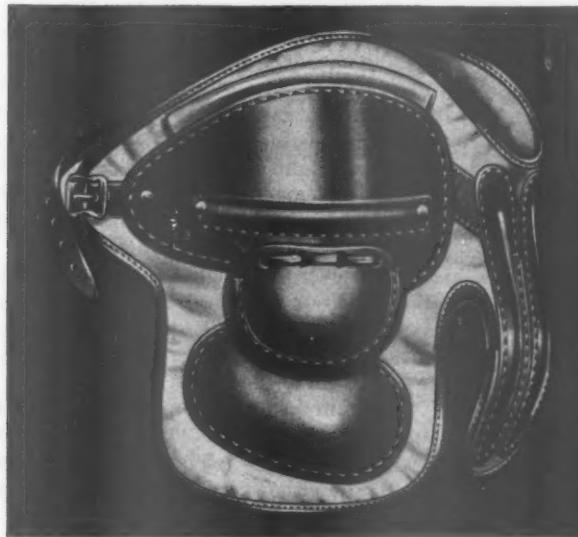


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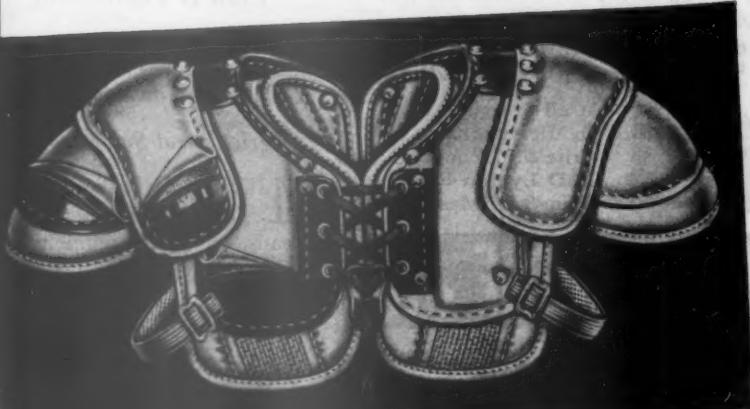
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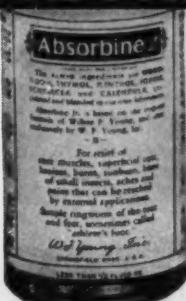
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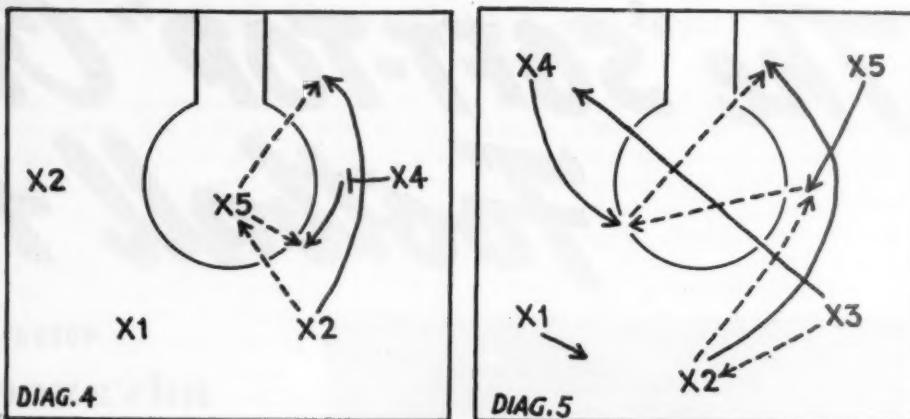
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every one is looking forward to a successful and spirited tournament in 1941.

Diagrams 2 and 3 show the offensive formation used by Flint Northern during the season of 1940. The play shown in Diagram 3 was also used by Fordson, runner-up in the 1940 tournament. In Diagram 2, X5 is the pivot man, in the single-pivot offense. X5, as he sees fit, may shift from one spot to another, as shown in the diagram, to set up a scoring play.

Diagram 3 is a very effective formation for use on a wide court.

Diagram 4 shows a play from the single-pivot formation, with the pivot man in the spot marked B, in Diagram 2. Two passes to the pivot man, and X4 moves in about two steps for a position screen on X2's guard when X2 cuts down the side court.

Diagram 5 shows a set-up from the double-pivot formation shown in Diagram 3. X3 has the ball, passes to X2, and cuts for the corner. As X3 cuts, X5 moves out and X2 passes to X5. As X5 gets the ball, X4 moves out of his corner and gets into the outer part of the free-throw circle, where he receives a pass from X5. Then X2, timing his break, goes around the outside of X5 for a break to the basket.

Class D Tournament

Russell A. Newell

Sherman Township Rural

Agricultural School, Weidman

MICHIGAN basketball teams are divided into Classes A, B, C and D. Because of our enrollment of under 125 students in high school we were allowed to enter the tournament in Class D, although most of our regular season games had been with Class C and B schools.

During the pre-tournament season our team was quite successful, winning fifteen of seventeen games. Of the two games we lost, one was lost by two points, the other by one point. We had one close game in the regional tournament in which we came from behind to score nine points in the last three minutes of play and won by a four-point margin. We won the state quarter finals by a score of 42-32, the semi-

finals 43-30. In the final game the score was 25-8 in our favor at the end of the third quarter, but at the end of the game was 30-21. I believe that our let-down in the last quarter was because our boys felt they could hold their lead and were very tired from so much tournament play. Our team scored 1,009 points in the twenty-five games this season, an average of 40.36 points per game.

We used a fast break, but did not try wild shots. If the break did not bring us up for a close-in shot we worked from a set position.

We worked hard on fundamentals the first part of the season. During this time I watched the boys closely and found the type of shot in which each was most proficient. Then they practiced these shots, with few others. My right forward, a boy, very fast and able to shoot with either hand, I used as a pivot man. Most of his shots were made from the pivot position. My center, the tallest boy on the team was 5 feet, 11 inches, and an excellent shot from anywhere around the free-throw circle. He came in from the left side, jumped high in the air, held the ball high and used push shots. The push was his best shot and in many games he netted from twenty to twenty-eight points. My left forward took the right side of the floor on slow breaks and made set shots from the side. My guards were good long shots, but were not called upon to do much shooting.

I believe our high scoring was due partly to our fast break and partly to the boys attempting shots at which they were most proficient, rather than shooting wildly from all positions.

Diagram 6 shows one play that we used successfully this year. On this play either guard passed to 3. Three in turn passed to 2, who either used his pivot or passed to 3, 1 or 5.

This play placed my boys in the positions which allowed them to use the shots for which they were best adapted; the right center the pivot shot; the center the push shot from the free-throw circle, and the right guard and left forward set shots. Our fast break functioned nicely because of the time that we spent on break and passing drills.

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We practiced both man-to-man and zone defense, but in most of our tournament play we used a zone. We used three men back with two men in the front line (Diagram 7).

One forward covered the man with the ball while the other dropped back to intercept passes to the pivot man. My center was a good defensive man and controlled the rebounds from the board. If the opponents used three men out, one of my guards moved up to cover the third man. We encouraged our opponents to try long shots, but challenged every shot.

IOWA

J. A. Grimsley

High School

Mason City

A GRADUATE of Southwestern College, Winfield, Kansas, where he played football, basketball and baseball, J. A. Grimsley has been at Mason City since 1923. Mr. Grimsley coaches the Mason City Junior College football team, which has won five junior college state championships in the last six years. His high school basketball team has been in the state basketball tournament seven times in the last nine years.

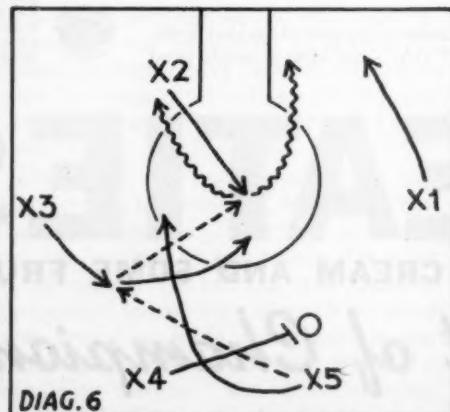
IN Iowa we have A and B classes of schools until time for the state tournament, when all sixteen schools, the eight winners of each class, are paired for the championship.

This year's tournament, held at the University of Iowa Field House, March 14, 15 and 16 exceeded all other state tournaments in Iowa, in class of teams, competition and in attendance. The attendance totaled 60,000 for the three days, the final night 13,500.

Regarding the class B teams, I thought that in general all-around play they were stronger than in years past, although no class B team reached the semifinals.

There was a very definite trend away from the zone defense this year, all teams in the semifinals using a man-for-man defense.

As a matter of fact, we did not play a team that used a zone defense. There



was a great deal less fast breaking than in past years. I believe most coaches are becoming convinced that they cannot rely upon fast break offense to win four games in three days.

Our team, Mason City High School, set more or less of a record this year winning twenty-two games in our regular schedule and ten tournament games, thirty-two games this year without a loss. We played probably the hardest schedule of any team in the state, meeting and defeating all of the larger schools.

We had an unusual team in that we did not have one good shot from the floor, most of our baskets being under-basket shots. Of our starting five, four boys were 6 feet or over, with one boy about 5 feet 6 inches.

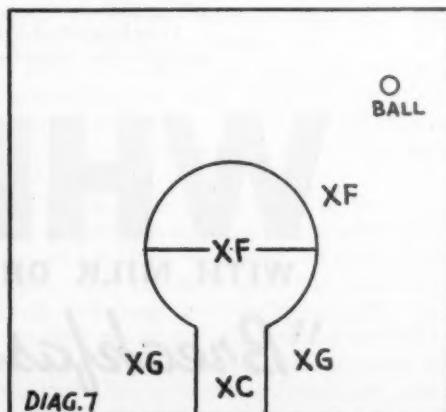
We used what might be called the delayed offense with set plays both against a man-for-man defense and a zone defense.

Very seldom did we use a fast break and never did we play any race-horse ball. We always used a straight assigned man-for-man defense, but would slide when we met good screening teams. We are somewhat old-fashioned here in Mason City regarding basketball. Our people have been trained to the slow, deliberate type of game with well-executed set plays, and they do not like the fast race-horse type that is so prevalent elsewhere. In our final game of the state tournament against Ames we gave a great exhibition of timing and set plays, and as a result we gained the acclaim of 13,500 fans.

Regarding the other teams in the tournament, Ames, the team that we met in the finals was coached by Kenneth Wells. His team using a slow type of deliberate game, man-for-man defense, was a very fine team and very well coached. Muscatine, coached by Bob Kinman, former Iowa University player, another very well coached team was a team of good floor-shots and an all-round good basketball team.

I shall diagram two of the plays Mason City used in winning the championship. Using about four plays, the boys did not call them by signal, but indicated them by different methods with the ball.

Two passed to 4, the center; 5 came out



to screen on 1. One cut for the basket and took a pass from 4. The guard 2, who made the first pass, waited until 1 cut and if no one got the ball from 4, 2 cut around outside of 4 and took the ball for a dribble in (Diagram 8).

The play shown in Diagram 9 we used with great success against teams that shifted or slid. Three, who was our best ball-handler, passed to 4, our right forward, then went inside and made a reverse screen on 4's man. Four simply handed 3 the ball and came out around in front. Three's man almost always took 4 coming around. That left 3 with a dribble in to the basket or an opportunity for a pass in to the post and a cut for the basket. The forward, 1 broke under the basket on this play and if the ball was passed to the post, he in turn passed it to 1 under the basket. On the preceding play, our guard 3 scored three baskets and on this play our forward 1 scored two in the final game.

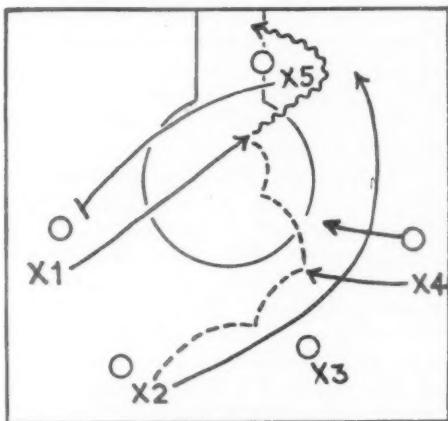


Diagram 8

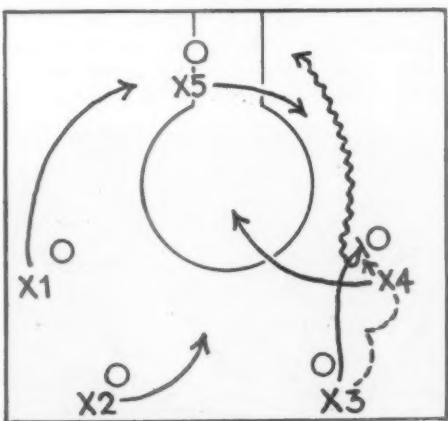


Diagram 9

BECAUSE of limited space, more write-ups of the various state basketball championships could not be carried in this issue. These reports from the technical view-point will be continued in the May and June issues. However, from the few here published and from the twenty additional ones already received, there can be no doubt in anyone's mind that the year 1940 surpassed all previous years in attendance at the tournaments. Both spectator and player-interest have this year reached a new high.

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MILORGANITE
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Chemical Weed Control as an Aid in Renovating Turf on Athletic Fields

(Continued from page 22)

persistence of the weeds mentioned is in the production of seeds. Prevent the plant from maturing seeds and the life line is severed. If this is done regularly and persistently, so that all of the seeds that live over in the soil are germinated and destroyed, the problem is immensely simplified. This is on the condition that a fresh supply is not introduced through top-dressing soils.

The problem of destroying weeds with chemicals is complicated by the requirements of the field in question. The use of chemicals results in temporarily discolored turf. If this tends to occur shortly before an important event it must be ruled out. It is dependent upon the ability of the ground keeper to use chemicals with intelligence. Without previous experience, one must become thoroughly acquainted with the effects and results by trials on small unimportant areas before applying the method to the entire field.

Spot-treating the rosette weeds such as dandelions, plantains, docks, and chicory is the safest, most rapid and most effective method known. Operations may be carried out at any time during the year when the plants are growing. By spot-treating before the blooming period in the spring, seed production can be largely controlled. The material which is being used on lawns, athletic fields, cemeteries and golf courses is made up of: 25 pounds fine dry screened sand, 10 pounds complete fertilizer such as 4-12-4 or 5-10-5, 1 pound sodium chloride and 1 pound sodium arsenite.

This mixture must be stored in glass or metal containers and labeled poison. It is possible to secure a prepared mixture at lawn and golf course supply houses. The dry mixture is used by placing a small amount directly upon the crown of the plant where it is soon taken up by the plant and absorbed into the root. The entire plant is thereby killed with no digging. The fertilizer helps the grass to heal the scar left by the disappearance of the weed. Not more than a one-fourth teaspoonful should be used for each ordinarily sized plant. The most efficient way to use it is in a weed gun made especially for the purpose, which may be obtained at most lawn and golf supply houses.

Knotweed is a tap-rooted annual which is difficult to control by the spot method. It is a hardy weed which can grow on the poor compact soils that have been puddled by constant play when the ground is wet. It grows luxuriantly on railroad station platforms and in the cinders of the roadbed. It is the first weed to appear in the spring and it can be recognized by the appearance of two reddish-green leaves that are supported by a red stem. It sel-

dom troubles good turf but invades the bare places where the turf has been ruined. It is most easily controlled when in this two-leaf stage before the good grasses have made much growth. Grass seed sown on knotweed-infested ground has little chance. Killing it in its early stages permits of greater success with spring seedings by eliminating competition.

The most effective method found so far is to spray the infested areas with a solution of sodium arsenite. The amount of sodium arsenite to use in spray form for each 1,000 square feet of area is three to four ounces, no more. The amount of water to use will depend upon the type of sprayer used. It is always best to calibrate each sprayer used with clear water (no chemical added) to determine the number of gallons of water needed to cover the 1,000 square feet effectively and uniformly. It is best to cover the area twice in opposite directions to be sure that there is uniform coverage. If the amount of water required to cover 1,000 square feet uniformly has been found to be three gallons, then, in this case, dissolve three ounces of sodium arsenite in three gallons of water and spray 1,000 square feet of area, accurately measured. Do not guess at amounts and areas. Use four ounces if the infestation is unusually severe and if there is no grass to discolor. Bluegrass injured by four ounces of sodium arsenite usually recovers in a week to ten days, if there is sufficient soil moisture to maintain its growth. Do not use sodium arsenite on extremely dry soils. Do not use it on bent grass, poa trivialis, or on newly seeded grass. The chemical will not injure the



Illustration 4—Rosette weeds may be treated with spoon, spatula or weed gun, using dry mixture.

germination of seeds in the soil that have not sprouted.

While it is true that knotweed can be destroyed by severe raking, it may cause the crab grass problem to be more severe due to the stirring of the seeds in the soil. If no crab grass is present, then destruction by tillage may be the better method. On the basis of cost and labor involved, the chemical method is the cheaper and more rapid.

It is entirely possible to use the sodium arsenite in the dry form combined with the application of fertilizer. Where this is done, the mixing must be thorough and the rate of application of the arsenite should be doubled, since it requires twice as much to produce results comparable to spraying as a fine mist spray. Sand or ground limestone may also be used as carriers for the sodium arsenite, a sufficient amount being used, so that uniform distribution can be obtained.

The Control of Crab Grass

The control of crab grass presents a more difficult problem. This weed is encouraged by spring seeding and fertilizing operations. It is true that it can be smothered and crowded out by a dense turf clipped to a height of two inches or more. If, however, the turf is not dense, other ways of controlling this weed must be found. There have been untold numbers of disappointments with spring re-seeding operations on athletic fields. By July there may be little or none of the expensive grass left—only a dull heavy mat of crab grass.

If the seeding can be done late in the fall after the last game (dormant seeding) it may have a good chance to start soon enough to develop a turf that will smother the young crab grass seedlings which start



Illustration 5—Mat weeds may be dusted with calcium arsenate, a flour sifter or duster being used.



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about the 10th of April in Southeast Pennsylvania. The critical date is proportionately later in more northern sections and at higher altitudes. Spring seedings, made before growth starts (early March in Southeastern Pennsylvania), may have a good chance to choke the crab grass, particularly if the seeding is done by mixing the seed with clean topsoil. Raking only stirs up the crab grass seeds and helps them along. Mixing the grass seed with topsoil and spreading the mixture about one-fourth inch thick helps to cover the crab grass seeds that lie close to the surface and may have some value in retarding their germination.

Chemicals in crab grass control are most effective when there is almost a solid mat present which has smothered all the good grasses. In a case like this there is little to save—in fact, the foul growth should be completely killed so that new seeding may be made in sufficient time to have a playable surface for fall games.

The first demonstrations on crab grass control made with chemicals used sodium chlorate alone. Later work has shown that there is usually a more complete kill by combining sodium chlorate and sodium arsenite. Sodium arsenite has been used alone with good results, but usually when there is a water supply available so that the turf can be kept well watered. Experimental evidence shows that sodium arsenite is much more injurious to grasses during July than during September. Conversely, sodium chlorate is more injurious to grass in September than it is in July. A small amount of arsenite with chlorate is probably the best combination to use for definite results on a playing field.

The time to treat for crab grass is during the latter part of July for Southeast Pennsylvania. This may correspond to early July for northern sections, or as late as mid-August farther south. The purpose is to clean out the crab grass before it has had a chance to set seed and to clear the way for an early seeding that will have little or no competition.

The combination of chemicals frequently used is one pound of sodium chlorate and four ounces of sodium arsenite, a total of twenty ounces to 1,000 square feet. Where sodium chlorate is used alone, the usual rate is two to two and one-half pounds to 1,000 square feet. If sodium arsenite were to be used alone the rate would be six to eight ounces to 1,000 square feet, the higher rate for a solid infestation of crab grass, the lower rate where some good grass is present.

The method of applying would be the same as for sodium arsenite for knotweed. The safest method is to mix the chemicals with the fertilizer that will need to be applied for the new seeding to follow. This requires care because the dust from sodium arsenite, extremely irritating to mucous membranes, will cause sneezing and watering of the eyes. Mixing should be done in

the open and dust masks should be worn by the operators. The advantage of combining the fertilizer with the weed-killing chemicals is that only one operation on the field is necessary. Neither has any deleterious effect on the other.

The quicker method is to apply the chemicals as a spray but where sodium chlorate is used, extreme care must be exercised because of the fire hazard present when sodium chlorate is in solution. In the dry form there is no direct fire hazard. Clothing soaked in a solution of sodium chlorate and allowed to dry is a potential match head. Friction will ignite it with serious effects to the wearer. Rubber boots and old clothing should be worn by a person while spraying. As soon as the operation is over all clothing worn should be washed out in clear water to remove the chlorate. *This is important.*

Within a week to ten days following the treatment all weeds will be dead. If there are a few spots still green where the operator missed, they may be retouched as soon as they show green which will be a few days after the first application. Seeding may be done a week to ten days after the initial treatment. It may be best to rake the heaviest part of the dead weeds off so that a seed bed can be prepared. If the weeds are not heavy, it may be better to leave them for a mulch to protect the new seeding. The seed bed may be prepared with a spike dicker such as one will find on most golf courses. This machine perforates the soil with holes about an inch deep at about a two-inch spacing. After the ground has been gone over several times, the soil is completely perforated right through the dead weeds. Grass seed broadcast over this type of seed bed will drop into the holes which will be a favorable place for them to germinate. A light top-dressing of clean soil and a light rolling to press the seeds firmly into contact with the soil will complete the job. If the soil is kept moist, the seed will germinate quickly. If the mower is set at three inches a turf sufficiently dense and deeply-rooted to withstand considerable punishment that fall will be developed. At least the turf will be clean and there will not be the usual crop of crab grass seeds to reinfest the field the following year. There will be more crab grass the next year because of the seeds still in the soil that did not germinate from the last crop. By a repetition of the process, or by some hand work the next year, the crab grass can be eradicated.

Remember that any chemical treatment will turn all vegetation completely brown. For the first two weeks, the ground will look as though nothing had ever grown there or ever would again. It takes courage to do this to a field but if the pest is to be conquered, then there is a justification for it.

The treatment for mat weeds is simple and uniform for the entire group. Two

materials may be used. The mixture for spot-treating rosette weeds may be diluted with equal parts of sand and lightly sprinkled on the patches. This material is powerful and the tendency will be to use too much and the grass as well as the weeds will be killed. It is easier to repeat the treatment than to replace the turf. The other material that may be used for mat weeds is calcium arsenate, a common insecticide that may be purchased at any hardware or seed store. It is best used in a duster or in an old flour sifter, coating the patches of weeds until they are white. It is most effective when the weeds are wet with dew.

Summary

Chemicals aid in weed control if used properly. They can just as effectively ruin good turf or other vegetation if used carelessly.

They must never be used on newly seeded grasses. When weeds infest new seedings the best way is to remove them by hand.

A good supply of soil moisture is essential to the success of chemicals. Never use them when the soil is baked and hard. A rain immediately following an application may reduce its effectiveness. A soaking a few days after an application will help the grasses recover.

Keep in mind that sodium chlorate is a fire hazard. Follow directions on the package. Do not take chances.

Sodium arsenite is a violent poison. Read directions for first aid in case of accidental poisoning. Use the same care that you would in handling rat poisons or other dangerously poisonous drugs.

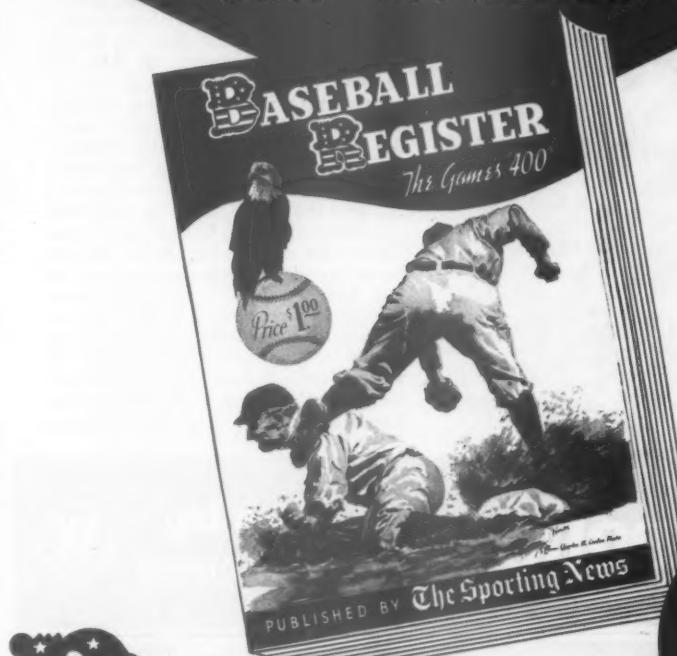
When in doubt—*don't*. Try a small area where it will not matter if the turf is scorched. Learn to know that, with which you are working. Know what it will do under your conditions. Definite directions cannot be made for all conditions. Each athletic field presents an individual problem just as surely as each golf course is different. When a fool-proof weed control is known, there probably will be no more weeds.

The suggestions in the foregoing have been made on the basis of hundreds of successful operations in Pennsylvania over a period of five years. They do not represent definite recommendations to be followed under any and all conditions. They are simply guides for the careful and observing ground keeper, in order that his work may be made more effective with lower labor costs.

Last year many coaches, not fortunate enough to have ground keepers, found Dr. Grau's article on the maintenance of turf on athletic fields helpful. This article gives additional information which should be of value. Coaches who have special problems not covered in this article are invited to send them to us.

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(Continued from page 14)

return along the base line and touch each base that he has passed. The baserunner will also have to touch first base before the ball is relayed back to the first baseman who may be touching the base or the baserunner will be out.

Question 7: What is the footwork of a second baseman?

Answer 7: The first thing that a second baseman should think about is his position on the infield. The distance he plays from second base depends on the following: 1. How much ground can he cover? 2. How strong is his throwing arm? 3. Which way can he go most easily to get a batted ball? 4. How many are out; the inning, score, whether or not there are men on bases, what bases are occupied, and the type of ball the pitcher is throwing. 5. To what field the hitter is likely to hit.

When a second baseman knows that he has to cover second base with a runner on first, he should move over a little closer to second and watch the baserunner out of the corner of his eye. He should stay in position until he sees the baserunner start for second, and then break for the bag and be there in plenty of time to receive the throw. In receiving the throw from the catcher, he should straddle the bag with the left foot on the outfield-side of the bag and his right foot on the infield-side. In this position he can catch the ball and with one motion touch the runner. He should be sure to give the catcher a target. If the ball is thrown wide, he should get in the best possible position to handle the throw.

On double plays, where the second baseman fields the ball first, he should watch his footwork. If, when fielding a batted ball, he is running toward first base, he should turn around to the left and throw. If he is running toward second he should make a quarter turn to the right and throw the ball. When he fields a ball near second base, he should not straighten up, but should toss the ball to the shortstop.

When the shortstop starts the double play, the second baseman should be in a position to catch the ball and make the throw to first without any loss of time. He may take his position with the base between his feet, or he may stand on the inside corner of the base. As soon as he catches the ball, he should step out into the diamond, pivot on his left foot and throw to first.

Question 8: How can you improve hitting?

Answer 8: Stance in hitting seems to be of little importance because all good hitters seem to have a style of their own. However, a hitter must have confidence, determination, good eyes and strong wrists. Some definite suggestions that may help improve hitting are as follows:
1. Hit the ball out in front before it

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crosses the plate. 2. Don't use too long a bat. 3. Don't use too heavy a bat. 4. Don't swing too hard. 5. Don't step into every pitch. 6. Step into the pitch when it is directly over the plate. 7. Pull a little on an inside pitch. 8. Step across on the outside pitch. 9. Keep the weight of the body on the rear foot until you step, ready to hit. 10. Don't swing at bad pitches. 11. Keep shoulders level. 12. Don't grip the bat tightly. 13. Don't stride too far. 14. Get as much batting practice as possible, having the pitchers pitch to your weakness.

Question 9: How do you build up the confidence of a batter who has been hit (beamed) by a pitcher? At present he steps in the "bucket."

Answer 9: One way to break a boy of this habit is to have him stand up at the plate when the pitcher is warming up. Let him watch the ball go by and do everything but swing. There have been many good hitters that stepped away from the plate.

Question 10: How much "inside" baseball is practical in high school?

Answer 10: It is not necessary for a high school team to play very much "inside" baseball. The essential things are to know the fundamentals of each position and how to execute them, and to have each boy know what he is going to do when he gets in a game.

All questions to be answered in the May issue should reach the publication office by April 15th.

Training for the Sprints

(Continued from page 12)

never very good but he had so much speed that he relied more on speed than on his ability as a hurdler. Donovan was also a good ball player and after the track season he usually went out for the baseball team, being placed in some position, where his speed would count. In one game Donovan did not make a hit but got on first base four times; once the catcher dropped the third strike and Donovan beat out the throw; then he had the infielders fighting the ball on account of his speed, and trying to throw it before they caught it, so with four errors he made the initial bag that many times.

Red Rolfe, the Yankee third sacker, and a former Dartmouth player, recently told the writer that, were he to start his baseball career again, he would spend much time trying to speed up. Rolfe is not slow, as far as ball players go, but he is not a speed demon. Zach Wheat, the old Brooklyn ball player, told the writer he attributed his yearly batting average of over .300 to the work that he did trying to speed up.

Regardless of the sport, an athlete should have the thought in mind that the more speed he can develop the more valuable he will be.

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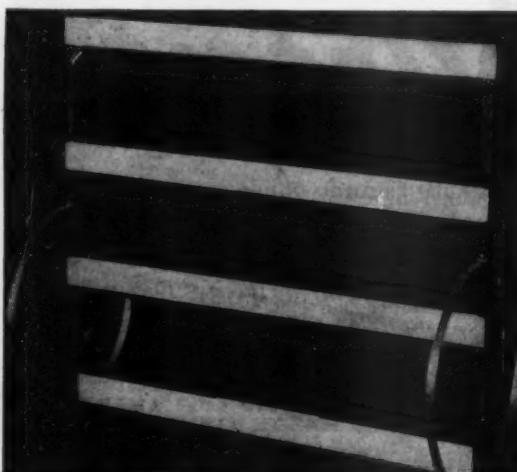
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Administration of a Relay Meet

(Continued from page 9)

functioning, particularly the clerks of the course who are charged with maintenance of an interesting and crowded schedule which, in most cases, should be completed in two hours or less.

Visiting coaches and teams have reason to expect hospitable attention while in the community, and if special entertainment in the way of dinners or extra sessions for coaches are not arranged, there should at least be a central place or headquarters where information concerning the town, accommodations, dressing room assignments, etc. may be dispensed. This is also a convenient place where competitors' numbers and tickets, mail, etc. may be delivered.

Lack of proper attention to preparations for the drawings-meeting too often results in inconvenience to the coaches. When possible, these meetings should be scheduled for a time when coaches are free from details connected with the teams accompanying them. It might be mentioned that these meetings should be so organized that, following the scratches in any event, the person conducting the meeting can correctly name the proper heat leaders. This requires familiarity with the records of competing individuals and teams. Too often the question of heat-leaders is left to the suggestions of the coaches and while they should be taken into consideration, there is usually no definite agreement as to the correct selection of seeded individuals or relay teams. When a number of outstanding performers are entered in a race, not only heat-leaders should be named, but second and third seedings should be made as well. The number of actual starters will usually determine the number of heats that will have to be run, and whether semifinal heats should be included. A logical person to conduct the drawings-meeting is the clerk of the course because, in case it is necessary to run semifinal heats, he, with the help of his assistants, should be able to segregate properly the men who have qualified in the preliminaries. It is usually acceptable to coaches to have the drawings made ahead of time for positions in the distance runs and distance relays and for order of competition in the field events; scratches only, then, are necessary at the time of the meeting. This saves considerable time and coaches in general appreciate having the drawings made as quickly as possible and out of the way. In all cases, it is reasonable for the management to eliminate individuals or teams from the competition, or, at any rate, to place them in convenient heats and lanes, if any team is not represented at the drawings-meeting. When a coach is unable to be present at the meeting, he



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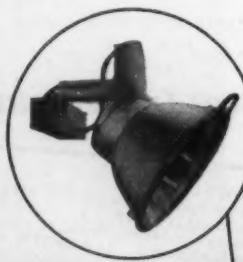
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can at least have someone represent him or can write, wire or phone his final decision as to actual starters in any race. There is little justification for delaying the progress of a drawings-meeting because of the non-representation of any expected team, and the responsibility should be placed on the coach to be represented by proxy if he cannot be present.

In the actual conduct of the meet, all officials should be familiar with their exact duties, and whenever possible, only experienced men should be used. One of the most difficult jobs is that of judging the finish, especially in sprint and hurdle races where a strong field may present a finish order that is hard to determine. For this reason moving pictures of all finishes are desirable, although much doubt can be eliminated by the taking of a still photo directly across the finish line by a skilled photographer. These pictures may be finished within a few minutes after the conclusion of a race. In my opinion, there is one set of officials, the inspectors, who often do not discharge their duties in a manner in which they should. It is the duty of the inspectors to see, among other things, that every competitor in a race is given an opportunity to pursue his proper course without interference from opponents. The rules state that, "Any competitor may be disqualified by the referee for jostling, running in front of or in any way impeding another, etc." I think that too many fouls which might be called under this rule are disregarded, leading to a carelessness on the part of some runners. In attempting to pass others, it should be a runner's responsibility to avoid any contact or interference with another runner, and since this is, in almost all cases, entirely possible, it will not be until the inspectors notice and report such infringements which, in turn, must be upheld by the referee, that the "accidental" fouls common in a good deal of our competition can be eliminated. Even in the case of a purely unintentional foul, should not a penalty be inflicted upon the person committing it, since the runner fouled has already been penalized by this interference?

To get back to the discussion of management, such a general committee, as has been outlined, would be composed of a total of nine men, a general chairman and sub-chairmen in charge of sub-committees responsible for the following: awards, equipment, preparation of field and track, program, promotion (including publicity), drawings, officials, and headquarters. The chairman or manager would take care of such details as inviting teams, giving all preliminary information, sending and receiving entry blanks, calling and conducting meetings and, in general, taking care of those items which do not naturally fall under the jurisdiction of his co-workers. He will also have to keep close watch over expenditures unless this duty is particularly assigned to some other person.

This is about as large a committee as can conveniently accomplish the work to be done, and it is possible that a committee of five or six could handle the whole job if some can take care of more than one department. This should be quite possible in any case where the meet does not attract more than forty or fifty schools. The success of any meet, as viewed from all angles over a period of years, will reflect the ability and industry of the men in charge.

Six-Man Football in the College Program

By Frank L. Cheney

Lambuth College, Jackson, Tennessee

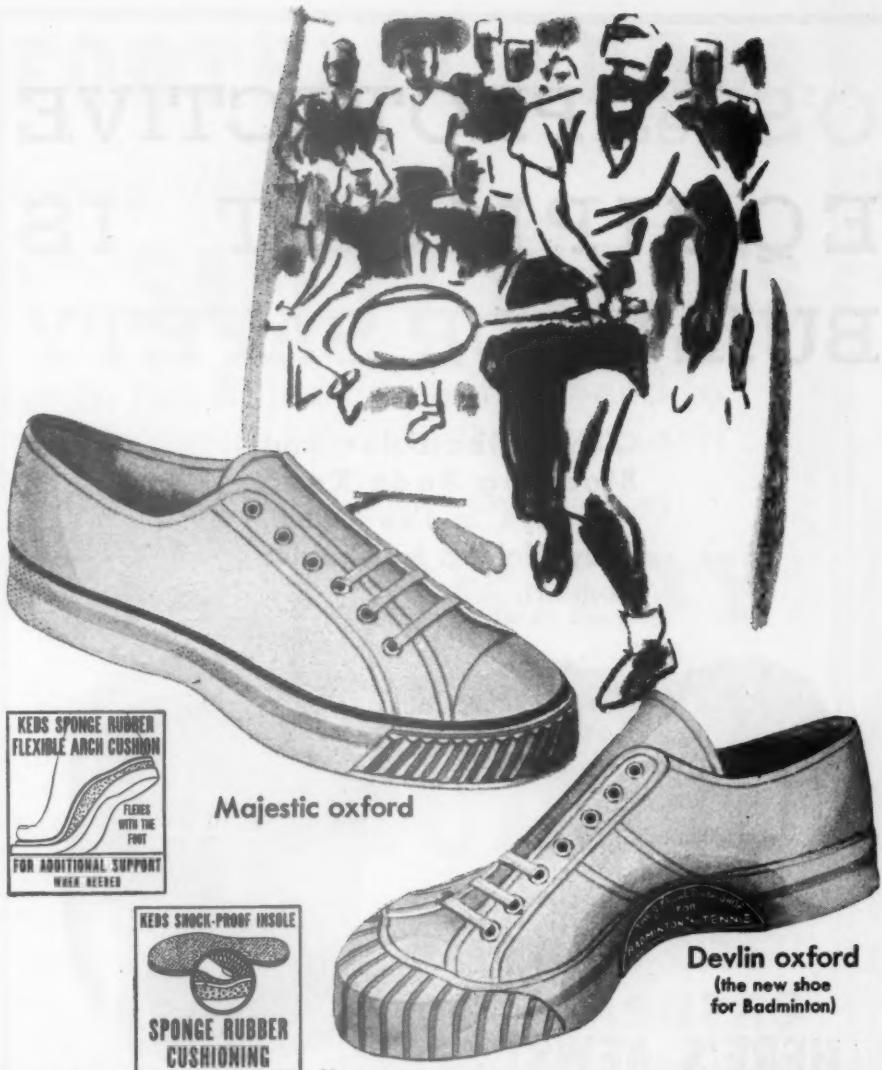
IT is not my object in writing about six-man football to interfere with the other games now in existence. It is my desire to see six-man football co-operate with its older brother, and be played where it is not feasible to play the eleven-man game. At Lambuth College we cannot compete with the eleven-man game. Our boys have become sold on the six-man game and appear to enjoy it thoroughly.

During the past fifteen years I have devoted my time to coaching and intramural work in high schools and colleges. From my own experience and the association with other men in the field, I am convinced that there is a definite place for the abbreviated game in the college or high school which is unable for one reason or another to sponsor the eleven-man game.

Lambuth College is one of the country's youngest colleges, having opened its doors for the first time in 1924. During the first ten years of its life, it maintained an eleven-man team, but like many other institutions during that trying period, it was forced to curtail expenses. Five years ago the eleven-man game was dropped as a regular sport. All of the other major intercollegiate programs were carried on, however, with no apparent curtailment necessary.

I came to Lambuth in the fall of 1937 and attempted to develop an intramural program. We adopted six-man football as one of our fall team-games. This was fairly successful, but it was felt that there was still something lacking in the spirit and morale of the entire student body.

Last spring our athletic committee decided that we should make an attempt to find out if some of our neighboring colleges would like to try the six-man game in an intercollegiate way along with their intramurals. Bethel College entered the field with us and we played home-and-home games with a great deal of success. The intercollegiate games were promoted to build the interest among the intramural



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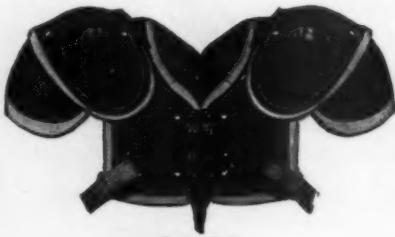
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players and to build a unified student body. To say that we accomplished our aims would be to put it mildly. For the first game we had only a half-hearted response, but for the second game, which was played at Bethel, the enthusiasm was bubbling over. The entire student body organized themselves into a caravan and followed the team.

It is a psychological fact that an individual must have something in which he can take pride, and so it is with any student body. To get the best co-operation from the student body, this pride, enthusiasm, morale, pep, or whatever we may want to call it, must be developed as early as possible. The morale of our student body has been developed this past fall to an amazing degree, while, heretofore, we have been forced to wait until the basketball season started. The work and co-operation of our student body have also been improved proportionately.

In our intramural work it was no trouble to arouse enthusiasm among the individuals or teams in the games in which they were interested. But it took something more than that to arouse the whole group in one cause.

Cost of Equipment

The cost of equipment for the eleven-man game is prohibitive in many cases. When we sponsored the eleven-man game our equipment expenses ran up in the neighborhood of fifteen hundred dollars. During the past three years for our intramural and intercollegiate six-man football, our average expense has been about two hundred and fifty dollars. We expect this next fall to equip twelve men completely at a cost of about three hundred dollars.

The Number of Players

With only six men to a team it is much easier in the small school to get two full teams out for practice than for a game which takes eleven men. We are a small school here at Lambuth. I feel safe in saying that we had two six-man teams that were better than one eleven-man team. Those who have coached football in the small school know the old problem of having to throw one half of the line against the other. This was always unsatisfactory for both the offense and defense. The six-man game is so fast that even in a close game practically all of the substitutes must be used to keep the game moving at full speed. This frequent substitution encourages better attendance and interest at practice periods.

Teaching and Coaching Field

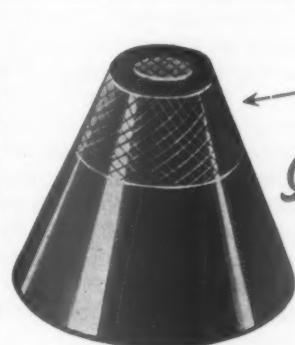
Many of the young college graduates of today, who enter the teaching field, are forced to start in some small high school and gradually work up to the larger schools. Here again the six-man game enters the field as many of the small high

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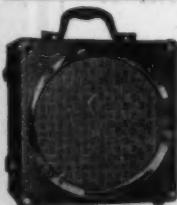
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schools have adopted the game as their fall interscholastic sport. I feel certain that most of my readers will agree with me that a man can teach or coach a sport better if he has actually played it; and the fundamental assignments, blocking, tackling and ball-handling, are enough different in the two games that the boy who has actually played the six-man game will be better prepared to teach it than the one who has not played it.

Six-Man Football Fundamentals

I have tried for the past three years to make as comprehensive a study of the game as possible. From this study I have divided the game into two general divisions, the open and what I shall call the orthodox type of play.

It seems to me that whenever the game is spoken of, we are inclined to think immediately of many long looping passes. This type I have chosen to call the open type.

The type that I shall call the orthodox is the one in which the team mixes power, running plays, deception and passes, trying to form a well-balanced attack.

We have, at Lambuth, from one hour and a half to two hours allotted to us for practice each day. This time is divided into periods each day with a certain time allowed for each part of the practice. We try to keep each session on schedule and to keep the practices moving.

As in any sport, the first of our early season practice is given over to conditioning. During this period we take setting-up exercises, run, fall on the ball and do dummy rolling on the ground. We do the latter stunt to build immediately a team which is blocking conscious.

After this period is over we go at once into teaching the fundamentals of the game. Blocking gets the first call. For the first two or three days all of the fundamentals are taught with a slow tempo. We then increase the speed until we have all the players hitting the dummy at full speed. By starting them out slowly, we find that their mistakes can be more easily discovered and corrections can be made. This also decreases the possibility of injury. I might add here that we had only one injury last fall and that was a sprained thumb.

Blocking

Because of the smaller number of men the shoulder and pivot blocks have less use than in the eleven-man game. These blocks are emphasized for use of linemen and for use by the backfield for certain plays. We assign the shoulder blocks on plays which go through the line, and on plays in which we use two men on one in order to get a man out in the open. Then we trail with one of these blockers for a lateral pass. We spend much time on the roll and cross-body block.

(Continued in the May issue)

Purdue Golf Clinic

West Lafayette, Indiana

April 10-11, 1940

THE Purdue University Division of Physical Education for Men, in cooperation with the Professional Golfers' Association of America, will conduct a golf clinic at the Purdue Field House, April 10-11.

Golf teachers, coaches and professionals from colleges, high schools, and clubs in the Mid-West have been invited by Director Noble E. Kizer to meet with such prominent exponents of the game as Horton Smith, Gene Sarazen, Tommy Armour, Johnny Revolta, and a score of nationally known professionals and educators, for a discussion of problems pertinent to golf instruction. Improved teaching methods and techniques will be related to specific local situations. These presentations will be mixed with a generous portion of the practical in the form of indoor and outdoor demonstrations.

Dr. Robert E. Dyer, a prominent Chicago physician and amateur golfer, will discuss *Physical and Mental Reactions in Golf*.

Herb Graffis, Editor of Golfdom will speak on *The Average Golfer*.

Dr. Edward C. Elliott, President of Purdue University, will welcome the visitors and discuss *Personality Traits as they Pertain to Selling*.

The Use of Visual Aids in Teaching will be presented by Coach W. A. Smith of the University of Minnesota, Roy Smith of Indianapolis, and Johnny Watson of South Bend, Indiana.

Golf in the High Schools will be reviewed by Frank Stafford of the Indiana State Bureau of Health and Physical Education.

Miss Helen Hazelton, Head of the Purdue Department of Physical Education for Women, and Ted Payseur, Golf Coach, Northwestern University, will discuss *Golf in the Colleges*.

Frank Srogell, Horton Smith, Tommy Armour, Dick Metz, Johnny Revolta and others will appear in a forum on *Golf Fundamentals* the afternoon of April 10.

Tom Walsh, President of Professional Golfers' Association of America will preside at the evening indoor exhibition of Golf Strokes in the Field House. This session will be followed by a Mass Class Demonstration for 350 Purdue men and women students. The visiting professionals and coaches will assist Mr. Walsh in this evening program.

Further information regarding this clinic may be had by addressing M. L. Clevett, Purdue University, West Lafayette, Indiana, who has been responsible for the origin and promotion of the Golf-clinic idea.



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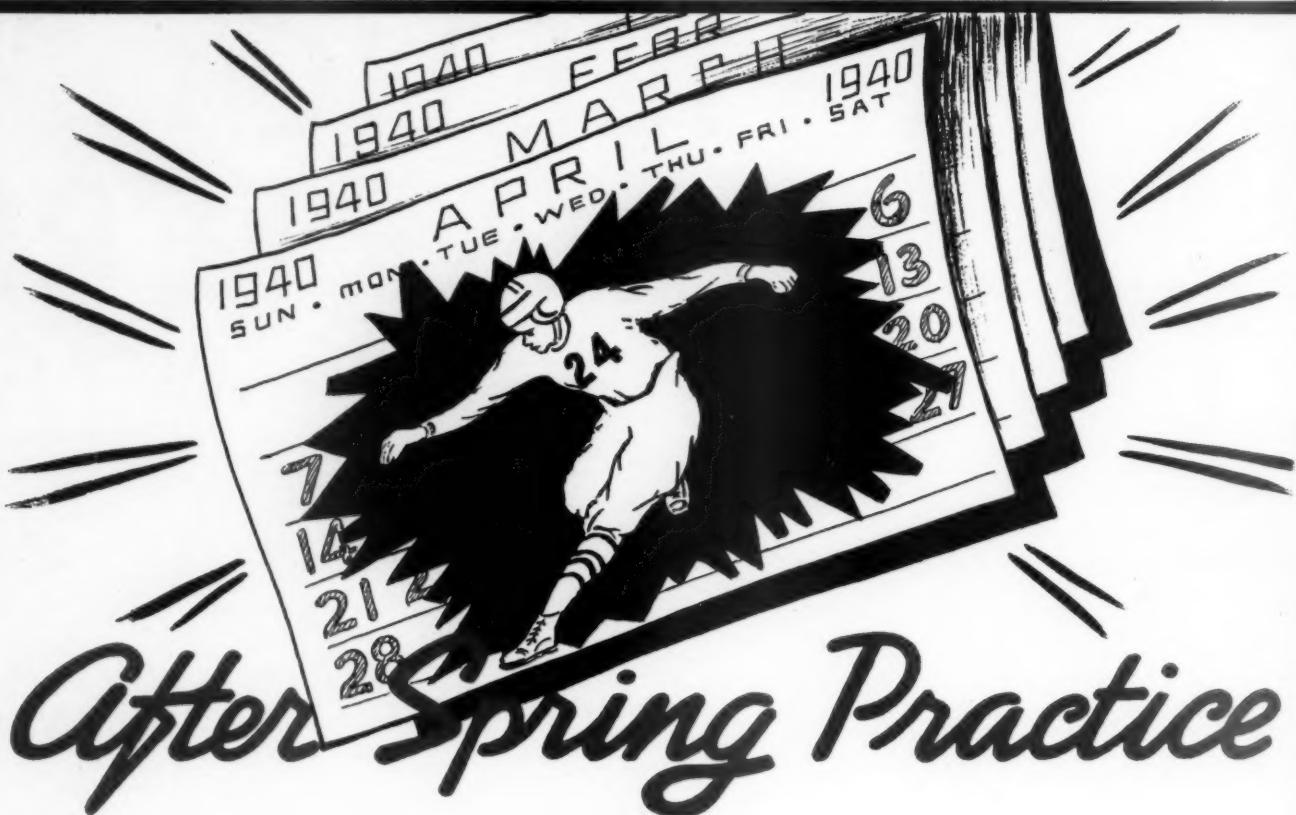


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